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16 PNY TECHNOLOGIES, INC.

17  
18 UNITED STATES DISTRICT COURT  
19  
20 NORTHERN DISTRICT OF CALIFORNIA  
21  
22 SAN FRANCISCO DIVISION

23 PNY TECHNOLOGIES, INC.,  
24 Plaintiff,  
v.  
25 SANDISK CORPORATION,  
Defendant.

26 Case No.: 11-cv-04689 WHO

27 **THIRD AMENDED COMPLAINT FOR  
ANTITRUST VIOLATIONS;  
DECLARATORY RELIEF; AND  
UNFAIR COMPETITION**

28 DEMAND FOR JURY TRIAL

29  
30 REDACTED PUBLIC VERSION

1 Plaintiff PNY Technologies, Inc. (“PNY”), by and through its attorneys, Winston & Strawn  
 2 LLP and Arnold & Porter LLP, files this Third Amended Complaint against Defendant SanDisk  
 3 Corporation (“SanDisk”) to secure damages, declaratory relief and injunctive relief, and demanding  
 4 trial by jury, claims and alleges as follows:

5 **NATURE OF ACTION**

6 1. SanDisk is the dominant firm in the United States, and indeed worldwide, in the  
 7 flash memory technology market. Flash memory is a ubiquitous product, found inside many  
 8 consumer electronic devices as well as in consumer memory products such as Universal Serial Bus  
 9 (“USB”) flash memory drives. Through its overwhelming share of the flash memory technology  
 10 market, SanDisk attempts to dominate three related downstream markets for (i) flash memory chips  
 11 (also referred to herein as “chips”), (ii) USB flash memory systems (*i.e.*, the combination of a  
 12 memory chip and a controller, also referred to herein as “systems”), and (iii) USB flash memory  
 13 system products (*i.e.*, the end product sold to consumers, also referred to herein as “USB  
 14 products”). PNY is a competitor of SanDisk in the systems and products markets, as well as a  
 15 customer of SanDisk in the markets for flash memory technology and chips. PNY brings this action  
 16 to redress SanDisk’s abuse of its monopoly power in flash memory technology to improperly  
 17 maintain and expand its power in that market and to suppress competition in each of the  
 18 downstream markets.

19 2. SanDisk has also attempted to monopolize a related but separate flash memory  
 20 system products market for SD cards (“SD flash memory system products” or “SD cards”). Like  
 21 USB products, SD cards use flash memory chips and a comparable flash memory system  
 22 configuration, but they have a different form factor, different connection interface, and tend to be  
 23 used in connection with different devices from USB products. SanDisk has surged recently to a  
 24 dominant position in the market for SD cards. One of the ways in which SanDisk has obtained and  
 25 maintained market power in the SD Cards market is through an extensive effort to secure exclusive  
 26 dealing arrangements with key retail outlets—a practice that has in of itself harmed competition as  
 27 detailed below.

28 3. In order to convert a flash memory chip to a usable product—whether USB or SD—

1 it is first necessary to combine the chip with a controller (a separate chip that manages the data  
 2 stored on a flash memory chip and communicates with a computer or electronic device), thereby  
 3 creating a USB or SD flash memory system, and, second, to add housing and a USB plug or SD  
 4 connection interface, thereby creating a USB or SD flash memory system product. PNY and other  
 5 specialized firms, referred to as “aggregators,” purchase chips in bulk to create systems and  
 6 products that are subsequently sold to consumers.

7 4. Other than SanDisk, there are only five firms in the world which manufacture flash  
 8 memory chips. SanDisk has extracted licenses from four of its five potential chip competitors and  
 9 receives royalties or other consideration from these firms when they manufacture chips, together  
 10 with SanDisk comprising approximately 90% of the market. However, the fifth firm, Micron  
 11 Technology, Inc. (“Micron”), refuses to license flash memory technology from SanDisk, and retains  
 12 a toehold in the chip marketplace, with an approximately 10% market share. PNY wishes to  
 13 purchase chips from Micron for use in its systems and products, but SanDisk, through abuse of its  
 14 monopoly power, has attempted to render it economically impossible for PNY to purchase from  
 15 Micron and instead to force PNY to purchase chips from SanDisk and its licensees.

16 5. SanDisk’s attempt to prevent PNY from purchasing chips from Micron is part of a  
 17 broader scheme to monopolize the chip market. SanDisk has tried and failed to force Micron to  
 18 license SanDisk’s flash memory technology. Unable to directly exclude Micron from the chip  
 19 marketplace, SanDisk instead indirectly excluded Micron through (a) eliminating aggregators, who  
 20 are among the most significant customers in the chip market, and (b) increasing the cost for chip  
 21 customers to purchase from Micron so that it could not be competitive with SanDisk and its  
 22 licensees in the sale of chips.

23 6. The primary mechanism of this unlawful scheme to exclude was a uniform, non-  
 24 negotiable “system license” that SanDisk imposed on aggregators’ (including PNY’s) manufacture  
 25 and sale of USB products, through the threat of financially draining, serial patent infringement  
 26 litigation. SanDisk takes the position that no firm can aggregate—combine a chip with a controller  
 27 to make a system—without a system license from SanDisk. However, SanDisk is not content to  
 28 merely extract a royalty for the use of its patents related to systems. Rather, as a condition of this

1 system license, SanDisk imposes a discriminatory royalty structure that effectively forces its  
 2 licensees to purchase chips only from SanDisk or one of its chip licensees. The effect is a tying  
 3 arrangement: in order to obtain the system license, an aggregator must, as a practical matter,  
 4 purchase its chip supplies from SanDisk or chip manufacturers who operate pursuant to a license  
 5 agreement with SanDisk.

6 7. In addition, SanDisk's uniform, non-negotiable USB system license contains a range  
 7 of other overreaching, anticompetitive terms. These include, among other things: (a) licensing only  
 8 a broad and unspecified patent portfolio (instead of specific individual patents); (b) requiring  
 9 royalties to be paid on worldwide sales, as opposed to only on products manufactured and/or sold in  
 10 countries where SanDisk has patent rights; (c) requiring competitors to pay multiple royalties on the  
 11 same item as it is resold downstream; (d) requiring licensees to share their future technological  
 12 innovations with SanDisk on a worldwide, royalty-free basis; (e) requiring licensees to pay royalties  
 13 on expired patents; (f) requiring licensees to pay royalties on invalid patents; and (g) requiring  
 14 licensees to pay royalties on patents that the licensee does not practice or that, as a matter of law,  
 15 the licensee does not infringe. Through these terms, as well as the tying arrangement described  
 16 above, SanDisk has engaged in patent misuse and has unlawfully extended and leveraged any  
 17 legitimate patent monopoly it may have to suppress and eliminate competition in other markets.

18 8. SanDisk's anticompetitive licensing scheme imposes restraints on its competitors  
 19 that raise their costs of doing business, obstruct entry and lessen the incentives to innovate in each  
 20 of the markets for flash memory technology, chips, systems, and products. This ultimately results  
 21 in higher prices and less choice for all U.S. consumers of flash memory-related products.

22 9. PNY seeks a declaration from this Court that: (a) SanDisk has violated federal and  
 23 California antitrust laws; (b) SanDisk has engaged in patent misuse; (c) SanDisk has engaged in  
 24 unfair competition in violation of California state law; and (d) the royalty provisions and other  
 25 anticompetitive terms of the uniform license entered into by SanDisk with PNY violate federal and  
 26 California antitrust and/or unfair competition laws and are unenforceable.

27 10. PNY also asks this Court to enjoin SanDisk under 15 U.S.C. § 26 from enforcing the  
 28 royalty provisions and other anticompetitive terms of the uniform license entered into by SanDisk

1 with PNY.

2 11. PNY also seeks treble damages, attorneys' fees, costs, expenses, and such further  
 3 relief as the Court deems just and proper in connection with SanDisk's anticompetitive licensing  
 4 scheme.

5 **THE PARTIES**

6 12. Plaintiff PNY Technologies, Inc. is a corporation organized and existing under the  
 7 laws of the State of Delaware, with its principal place of business at 100 Jefferson Road,  
 8 Parsippany, New Jersey 07054. PNY assembles products in its Parsippany facilities and maintains  
 9 additional facilities and/or offices in San Jose, California, Irvine, California, and Miami, Florida.  
 10 PNY employs approximately 535 people worldwide, including in the United States.

11 13. Defendant SanDisk Corporation is a corporation organized and existing under the  
 12 laws of the State of Delaware, with its principal place of business at 601 McCarthy Boulevard,  
 13 Milpitas, California 95035.

14 **JURISDICTION AND VENUE**

15 14. This Complaint is filed and this action is instituted under Sections 4 and 16 of the  
 16 Clayton Act (15 U.S.C. §§ 15, 26) to recover the damages caused by, and to secure injunctive and  
 17 declaratory relief against, SanDisk for its past and continuing violations of Sections 1 and 2 of the  
 18 Sherman Act (15 U.S.C. §§ 1 and 2), and Sections 2 and 3 of the Clayton Act (15 U.S.C. §§ 13 and  
 19 14), as alleged herein.

20 15. This Court has original and exclusive jurisdiction over the subject matter of this civil  
 21 action under 15 U.S.C. § 15, and 28 U.S.C. §§ 1331 and 1337. This Court may exercise  
 22 supplemental jurisdiction over the state law based claims pursuant to 28 U.S.C. § 1337.

23 16. This Court has personal jurisdiction over SanDisk because, upon information and  
 24 belief, SanDisk maintains its principal place of business, and transacts business on a systematic and  
 25 continuous basis, within this District, and may be found here, within the meaning of 15 U.S.C. §§  
 26 15, 22 and 28 U.S.C. § 1391. Further, the unlawful acts alleged herein were performed and  
 27 occurred in material part within this District, and the PNY-SanDisk License at issue states that the  
 28 parties submit to the jurisdiction of this Court for any action brought pursuant thereto.

17. Venue is proper in this Court pursuant to 15 U.S.C. § 22, 28 U.S.C. § 1391(b) and (c) and 28 U.S.C. § 1400(b) because SanDisk resides in this judicial district, transacts business, is found and/or has agents in this district and the PNY-SanDisk License at issue states that the parties waive any objection to venue in this Court.

18. This Court may declare the rights and other legal relations of the parties pursuant to  
28 U.S.C. §§ 2201 and 2202 because this is a case of actual controversy within the Court's  
jurisdiction.

## **INTRADISTRICT ASSIGNMENT (Civil L.R. 3-5(b))**

19. Because this action is an Intellectual Property Action as specified in Civil L.R. 3-2(c), it is to be assigned on a district-wide basis.

## **INTERSTATE COMMERCE**

20. SanDisk sells its products and services across state lines.

21. SanDisk purchases goods and supplies in interstate commerce.

22. SanDisk's actions complained of herein have restrained and adversely affected interstate commerce, and will continue to do so absent this Court's intervention.

## **FACTUAL ALLEGATIONS**

## Flash Memory Technology

23. The products at issue in this case are all part of a segment of the electronics industry that is known as removable solid-state storage flash memory technology (hereinafter “flash memory technology”).

24. Flash memory is a type of non-volatile computer memory that can be electrically erased and reprogrammed. It is “non-volatile” because it retains the information stored in it even when the electric power is off. It is a current mainstream technology for mass data storage and data transfer applications, and is used as embedded and removable data storage in a wide variety of products, including Universal Serial Bus (USB) drives, CompactFlash (CF) cards, solid-state drives (SSD), and Secure Digital card (SD), which in turn are used in connection with a variety of other products such as computers, tablets, mobile phones, digital cameras and camcorders, and GPS devices.

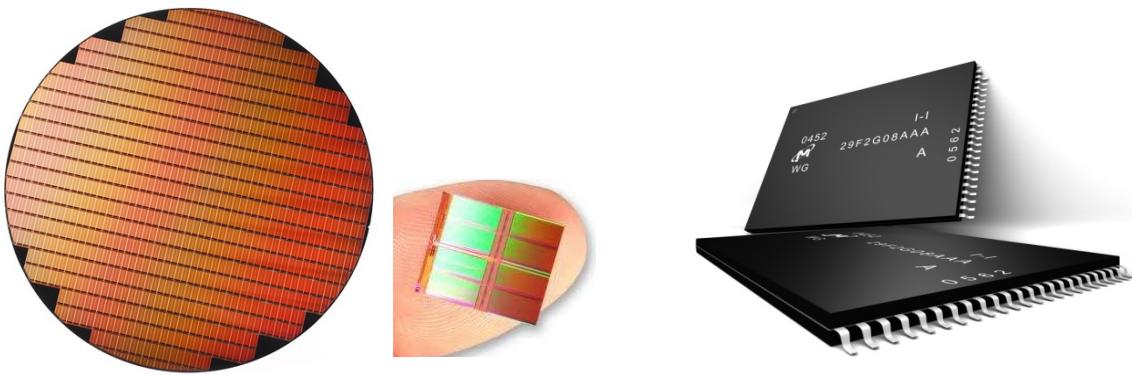
1       25. In 2011, \$21.2 billion of flash memory products were sold worldwide. Such  
 2 products are widely purchased and used by U.S. consumers and are considered one of the most  
 3 important forms of data storage in the marketplace. Flash memory technology is anticipated to  
 4 remain in widespread use for years to come.

5       26. Presently, and for the foreseeable future, there are no other data storage products that  
 6 are reasonably interchangeable with products based on flash memory technology. No other type of  
 7 data storage product offers the same combination of non-volatile storage, speed, and price as flash  
 8 memory.

9       27. A **flash memory chip** consists of one or more integrated circuits. These chips are  
 10 incorporated into flash memory systems. A flash memory chip may be in the form of a “die,”  
 11 which is a unit of flash memory suitable for incorporation into a flash memory system, or it may be  
 12 in form of a larger “wafer,” which consists of multiple flash memory dies that must be cut into  
 13 individual dies to be incorporated into flash memory systems. Flash memory chips are sometimes  
 14 also referred to as “flash memory devices.” The technology primarily used in flash memory chips  
 15 today is what is known as a “NAND” architecture, and some market participants refer to flash  
 16 memory chips as NAND flash memory.

17       28. A **flash memory system** includes a flash memory chip and a “controller,” which acts  
 18 as an interface between the chip and a host (such as a computer). These systems are incorporated  
 19 into flash memory system products.

20       29. A **flash memory system product** includes a flash memory system as well as the  
 21 other housing and component parts that comprise the products that end users purchase in retail  
 22 locations or on the internet. Examples of flash memory system products include USB drives, SD  
 23 cards, CF cards, and Solid State Drives. Among these various types of products, this complaint is  
 24 primarily focused on (a) the market for USB flash memory system products, and (b) the market for  
 25 SD flash memory system products.

1 TABLE 1: FLASH MEMORY CHIPS, SYSTEMS & PRODUCTS  
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89 **Flash Memory Chips** showing wafer (left), die (center) and chip (right) (credit: Micron)  
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1819 **Flash Memory System** showing **flash memory chip** (left) on circuit board with controller  
20 (right) within **USB flash memory system product** casing (credit:  
21 [http://upload.wikimedia.org/wikipedia/commons/8/8c/USB\\_Drive\\_Open.jpg](http://upload.wikimedia.org/wikipedia/commons/8/8c/USB_Drive_Open.jpg))  
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1 [TABLE 1, CONTINUED]  
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67 **USB Flash Memory System Product** (credit: PNY)  
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17 **SD Flash Memory System** (left) showing two flash memory chips on circuit board above a  
18 controller chip; MicroSD and **SD flash memory system products** (right) (credit:  
19 [http://en.wikipedia.org/wiki/File:SD-extreMEmory\\_2GB\\_alt\\_innen.jpg](http://en.wikipedia.org/wiki/File:SD-extreMEmory_2GB_alt_innen.jpg); SanDisk; PNY)20  
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30. In the case of both USB and SD flash memory system products, the chip is by far the largest portion of the overall cost of the product. The controller, circuit board, packaging, and other component parts tend to account for a small proportion of the overall cost.

31. Some companies, including SanDisk, are “vertically integrated,” manufacturing chips, systems, and products both to sell directly to consumers (*e.g.*, SanDisk-branded products) and for sale to third parties who will then assemble systems and/or products to be sold to consumers under a variety of different brand names.

32. Vertically integrated manufacturers have extremely high fixed costs and overhead as a result of the fabrication facilities that cost up to \$8 billion to build, and which must constantly be

1 updated and operated to produce flash memory chips. On February 26, 2010 at SanDisk's Investor  
 2 Day, SanDisk's founder and then Chief Executive Officer, Dr. Eli Harari stated that “[y]ou have to  
 3 build a mega-fab because otherwise you are not going to make much difference. First of all, but  
 4 more importantly, you are not going to be competitive. Small fabs don't cut it. OK, it's really a  
 5 mega-fab or stay at home. That's the magnitude. . . . Now I would say that those mega-fabs don't  
 6 necessarily ramp overnight. This is not like a 6 month exercise. A mega-fab could easily take two  
 7 to three years to ramp [up].” In order to recoup the large fixed costs of building the fabrication  
 8 facilities, vertically integrated manufacturers typically produce at near maximum output. This at  
 9 times creates an oversupply of chips in the market, driving down the purchase price of such chips.

10 33. Among the third party purchasers of chips are “**aggregators**” who assemble such  
 11 materials with other component parts to create systems and products. PNY is an aggregator that,  
 12 among other things, sells USB and SD flash memory system products to end users throughout the  
 13 world.

14 34. Aggregators are nimble market participants with greater flexibility, lower fixed  
 15 costs, and less overhead than vertically integrated companies. When prices for chips drop,  
 16 aggregators can take advantage of the price drop to produce and/or sell lower-cost systems or  
 17 products.

18 35. Aggregators function as mavericks in the marketplace and can pursue aggressive and  
 19 independent pricing strategies, all to the benefit of consumers. SanDisk's internal documents are  
 20 replete with statements about PNY's disruptive low pricing, including the following: (a) PNY's low  
 21 prices are “off the charts”; (b) PNY's pricing is “so much lower” than SanDisk; (c) PNY's pricing is  
 22 “ugly and crazy”; (d) “This will be especially dicey if we are forced to be competitive with such a  
 23 price in the market”; (e) “PNY pricing being extended to Costco – ouch!”; (f) “These guys are  
 24 driving us crazy. We need to ensure they do not get a toe hold”; (g) PNY are “jerks” who are “not  
 25 interested in building a brand just getting sales!”; and (h) “PNY has taken the position of having  
 26 better everyday pricing with a lower delta when on promotion. This is a good strategy and a pricing  
 27 strategy I spoke about a few weeks back! We may want to follow a similar strategy. We should  
 28 review!”

1       36. SanDisk has recognized the role of and major competitive threat posed by  
 2 aggregators. For example, in a 2006 internal email regarding Kingston Technology Company  
 3 (“Kingston”—a major aggregator in that timeframe—SanDisk stated “Kingston is very aggressive  
 4 in pricing in US distribution channel, and we (SanDisk) currently decided not to compete to their  
 5 level of pricing. (don’t want to trash US market price).” SanDisk has also referred to Kingston’s  
 6 pricing as “insanity.”

7       37. In an October 2006 email, SanDisk recognized that the “premium prices [SanDisk]  
 8 has in the US distribution above Kingston and others . . . is between [REDACTED] and [REDACTED]! This is just  
 9 ugly (compared to the competition) and to no surprise we are loosing [sic] share.”

10      38. In a November 2006 email, SanDisk stated that “the market is ugly for these USB  
 11 drives in which most buyers believe are to [sic] much of a commodity to carry higher pricing” and  
 12 that “now that we have Lexar, PNY, Verbatim and Memorex all going to these ugly price points, I  
 13 do not think we can change a buyers perspective.”

14      39. In a December 2006 email, SanDisk also admitted that “Verbatim and Kingston  
 15 products are typically much lower priced than our equivalents” and that SanDisk is “very  
 16 uncompetitive in general distribution.” During that same time SanDisk observed that “our data  
 17 from the last year and a half is that we see double digit declines in sales when we are higher than  
 18 Lexar or PNY at WM [Wal-Mart]. Even [REDACTED] higher makes a difference.”

19      40. In a 2008 competitive analysis of Kingston, SanDisk observed that Kingston was  
 20 “able to control costs” by, among other things, “keeping the overhead costs low” and “buying  
 21 opportunistically rather than manufacturing flash memory and controller chips.” It also noted that  
 22 Kingston was able to buy flash memory chips “at lower rates than the spot market” and had the  
 23 capacity to purchase in large quantities when chip manufacturers wanted to sell off excess  
 24 inventory. Kingston was thus able to offer prices in the U.S. market that “undercut SanDisk pricing  
 25 structure.”

26      41. In a 2008 competitive analysis of Samsung Electronics Co., Ltd. (“Samsung”—a  
 27 vertically integrated manufacturer of flash memory—SanDisk observed that “to reduce excess  
 28 inventory Samsung supplies low cost memory to our competitors—Kingston, Adata, Transcend.

1 This can in turn put pressure on SanDisk's profit margins." Kingston, Adata and Transcend were  
 2 all aggregators at the time.

3       42. In a 2008 email, SanDisk stated that "Kingston and others are still priced very  
 4 aggressive. We need to decide the 'bottom price' that we will walk away from the business. For  
 5 example, is [REDACTED] net-net for a 2GB at QVC (the TV shopping show) the lowest we will go?  
 6 Kingston and PNY are closer to [REDACTED] net-net no price protection. We need to set the boundaries."

7       43. In addition to aggregators, the USB flash memory products market includes  
 8 "relabelers," who purchase and resell products. As the name implies, a relabeler purchases  
 9 finished products and affixes its label to the product prior to resale. Because relabelers do not  
 10 source their own chips or systems, they do not exert nearly as much pricing pressure on vertically  
 11 integrated firms (like SanDisk) as do aggregators.

### **Relevant Markets**

13       44. SanDisk's anticompetitive conduct has affected and continues to affect at least five  
 14 relevant markets: (1) the flash memory technology market; (2) the downstream market for flash  
 15 memory chips; (3) the downstream market for flash memory systems; (4) the downstream market  
 16 for USB flash memory system products; and (5) the downstream market for SD flash memory  
 17 system products. PNY is a customer in the first two markets—for flash memory technology and  
 18 chips; both a customer and a competitor in the third market—for systems; and a competitor in the  
 19 fourth and fifth markets—for products. As elaborated below, PNY alleges that SanDisk has  
 20 monopoly power in the flash memory technology market, and at least a dangerous probability of  
 21 gaining monopoly power in the flash memory chip, systems, and products markets.

### ***Flash Memory Technology Market***

23       45. SanDisk has substantial market power, and indeed monopoly power, in the flash  
 24 memory technology market, which includes the technology and associated intellectual property  
 25 rights needed to manufacture, import, and sell flash memory chips, systems, and products in the  
 26 United States. There are no reasonably interchangeable economic substitutes for flash memory  
 27 technology.

28       46. On information and belief, SanDisk owns more than 1,700 United States patents

1 related to flash memory technology, which SanDisk claims cover all feasible flash memory  
 2 technologies in the United States. SanDisk claims that there is no commercially viable flash  
 3 memory system product that does not practice its technology and that there is no manufacturer of  
 4 flash memory chips, systems, or products that does not use its technology. SanDisk takes the  
 5 position that anyone selling flash memory chips, systems or products in the United States needs a  
 6 license from it (or, in the case of SD cards, from SD-3C—an entity combining certain SanDisk,  
 7 Panasonic and Toshiba intellectual property) and it sedulously enforces this position with patent  
 8 infringement litigation.

9       47. SanDisk claims to have a one hundred percent (100%) share of the market for flash  
 10 memory technology in the United States. As discussed below, at least one other party competes in  
 11 the flash memory technology market and disputes SanDisk's claim to a 100% share of the flash  
 12 memory technology market, but SanDisk has been successful in obtaining licenses from (and  
 13 preventing its flash memory technology competitors from obtaining licenses from) the  
 14 overwhelming majority of market participants.

15       48. SanDisk's claim to 100% of the market for flash memory technology in the United  
 16 States was confirmed by the 2007 statement of its co-founder and then President, Sanjay Mehrotra,  
 17 to attendees at a Morgan Stanley technology conference that SanDisk has "strong IP fundamentally  
 18 that cover the broad spectrum of all competitors and products that are out there" and that "anybody  
 19 who participants [sic] in the NAND flash business or NAND flash products business needs a  
 20 licensed contender [sic]."

21       49. SanDisk receives hundreds of millions of dollars of revenue each year in royalty  
 22 payments related to its flash memory technology licensing—both for flash memory chips and  
 23 systems. In its 2011 Annual Report, SanDisk reports that as a result of its "extensive patent  
 24 portfolio that has been licensed by several leading semiconductor companies and other companies  
 25 in the flash memory business [its] cumulative license and royalty revenues over the last three fiscal  
 26 years were approximately \$1.28 billion."

27       50. SanDisk's licensing strategy was publicly described by Mr. Mehrotra in 2007 as  
 28 "monetizing our IP in terms of royalties" and also "leveraging our IP in terms of getting access to

1 capacity, getting access to the card format . . . which ultimately doubled our revenue and gross  
 2 margins."

3 51. On information and belief, SanDisk receives royalties from flash memory chip  
 4 manufacturers consisting of a percentage of the sales price or value of the chips sold on a worldwide  
 5 basis. In other cases, SanDisk receives consideration for such sales in other forms, such as a  
 6 royalty-free cross-license to use intellectual property of the licensee. (See Table 2, below.)

7 52. For example, on information and belief, on October 12, 1995, SanDisk and Intel  
 8 Corporation ("Intel") entered into a Patent Cross License Agreement, obligating Intel to pay  
 9 SanDisk the following: (a) royalties of [REDACTED] on [REDACTED]  
 10 [REDACTED]  
 11 [REDACTED] (See Table 2,  
 12 below.)

13 53. On information and belief, on August 14, 2002, SanDisk and Samsung executed a  
 14 Second Settlement and Patent Cross License Agreement, obligating Samsung to pay SanDisk the  
 15 following: (a) a license fee of [REDACTED]  
 16 [REDACTED]  
 17 [REDACTED] and (d) royalties of between [REDACTED]  
 18 [REDACTED]

19 54. On information and belief, upon the expiration of the cross-license agreement  
 20 referenced above, in August of 2009, SanDisk and Samsung entered into: (i) a second cross-license  
 21 agreement whereby Samsung is reported to be paying SanDisk a 2.5% royalty on the sales price of  
 22 its flash memory chips; and (ii) a [REDACTED]  
 23 [REDACTED]. (See Table 2, below.)

24 55. On information and belief, on March 20, 2007, SanDisk and Hynix Semiconductor,  
 25 Inc. ("Hynix") executed a Patent Cross License Agreement, obligating Hynix to pay SanDisk the  
 26 following: (a) a license fee of [REDACTED] and (b) royalties of between [REDACTED]  
 27 [REDACTED]  
 28 [REDACTED] (See Table 2, below.) On information and belief, the Patent Cross License Agreement

1 also referenced the simultaneous execution of a memorandum of understanding to establish a joint  
 2 venture between SanDisk and Hynix.

3 56. On information and belief, SanDisk and Toshiba Corporation (“Toshiba”) executed a  
 4 Patent Cross License Agreement on July 30, 1997, obligating Toshiba to pay SanDisk the  
 5 following: (a) a license fee of [REDACTED] (b) an additional license fee of [REDACTED] per quarter; and  
 6 (c) royalties of between [REDACTED]  
 7 [REDACTED]

8 57. On information and belief, in 2002, SanDisk and Toshiba amended their Patent  
 9 Cross License Agreement to become royalty-free as part of the decision to enter into a joint-venture  
 10 to design, manufacture and sell flash memory chips, systems and products known as Flash Vision.  
 11 (See Table 2, below.) [REDACTED]  
 12 [REDACTED]  
 13 [REDACTED]  
 14 [REDACTED]  
 15 [REDACTED]

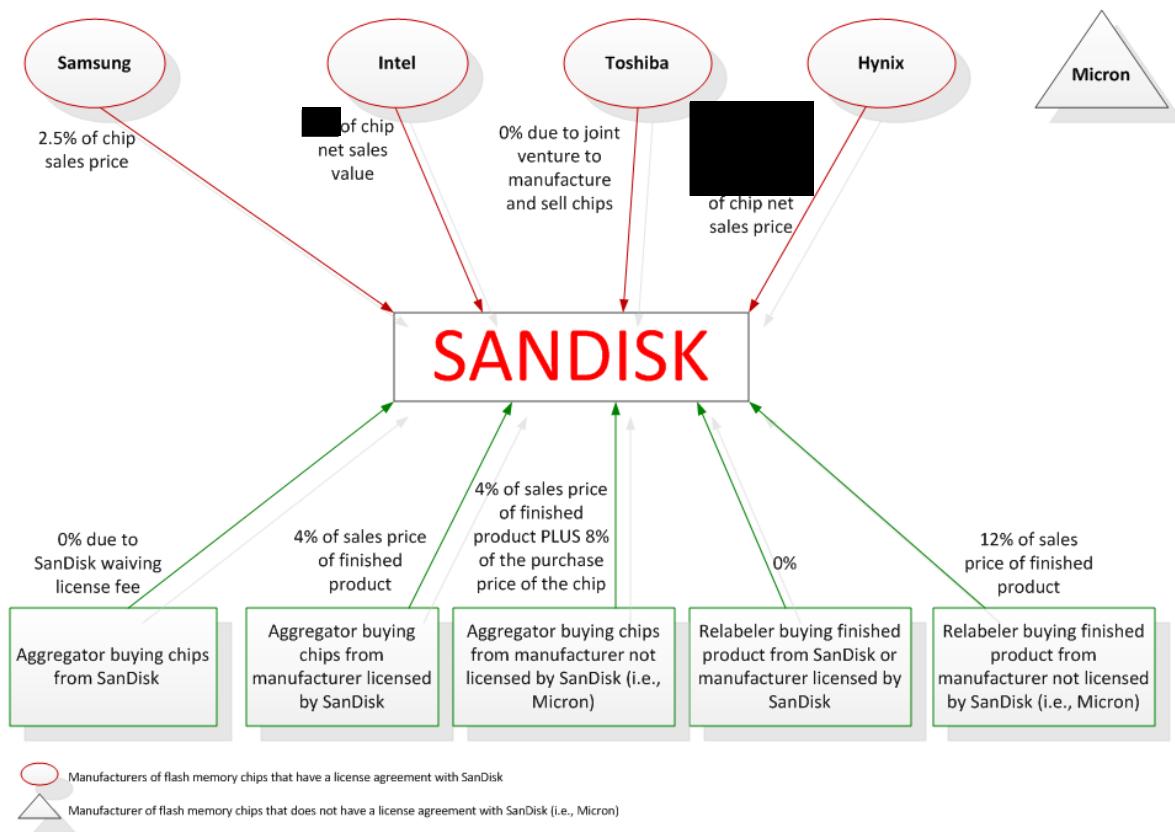
16 58. On information and belief, since May 2000, SanDisk and Toshiba have been  
 17 engaged in series of joint ventures known as Flash Vision, Flash Partners, Flash Alliance and Flash  
 18 Forward (collectively, “Flash Venture Entities”) for the manufacture of flash memory chips to be  
 19 used in each company’s respective flash memory systems and products and for sale to third parties.  
 20 SanDisk owns 49.9% of each of the Flash Venture Entities. Each Flash Venture Entity purchases  
 21 flash memory chips (in wafer form) from Toshiba at cost and then resells those wafers to SanDisk  
 22 and Toshiba at a cost plus a mark-up. SanDisk is contractually required to purchase half of the  
 23 Flash Venture Entities NAND wafer supply or pay for half of the Flash Venture Entities’ fixed costs  
 24 regardless of the output SanDisk chooses to purchase. SanDisk is also contractually required to  
 25 fund 49.9% of the Flash Venture Entities’ costs to the extent that the Flash Venture Entities’  
 26 revenues from wafer sales to SanDisk and Toshiba are insufficient to cover those costs. The  
 27 investments in the Flash Venture Entities are equally shared between SanDisk and Toshiba. In  
 28 addition, SanDisk has the right to purchase a certain amount of wafers from Toshiba on a

1 preferential “foundry” basis. SanDisk refers to the flash memory chips that it purchases from these  
 2 joint ventures with Toshiba as its “captive supply” which SanDisk claims provide it with low-cost  
 3 flash memory.

4       59.     In a July 2007 earnings call, SanDisk’s then Chairman and Chief Executive Officer,  
 5 Dr. Eli Harari, was asked to respond to the following question: “It seems like you’ve locked up the  
 6 bulk of the NAND manufacturing marketplace in terms of the licensing opportunity, you are now  
 7 diversifying and going into sort of ancillary and related opportunities. And could you just talk a  
 8 little bit about the potential for licensing outside of the manufacturers and into the other NAND  
 9 market area and how you look at that opportunity versus the magnitude of the opportunity you’ve  
 10 got with the manufacturers?” Dr. Harari responded as follows: “We’ve said that we think we have  
 11 most of the NAND manufacturers and NAND, NOC manufacturers covered and we of course have  
 12 by virtue of SD, many of the microSD being a very large part of the card business. We have that  
 13 covered through the SD association. We don’t have the other card manufacturers and USB flash  
 14 drive covered in this. This is a target area that we are pursuing through this licensing program.”

15       60.     In addition to the royalties received from flash memory chip manufacturers, SanDisk  
 16 also receives royalties from those making systems and/or products (*i.e.*, aggregators) consisting of a  
 17 percentage of the sales price of the finished products and the purchase price of the chip. PNY’s  
 18 license, for example, provides for a 4% royalty on the sales price of the finished product, as long as  
 19 it uses chips purchased from SanDisk or its licensees. If it uses an “unlicensed” MLC flash memory  
 20 chip (*i.e.*, purchased from Micron), PNY must also pay SanDisk an **additional** 8% royalty on the  
 21 purchase price of the “unlicensed” chip to enjoy the protection of the license. (See Table 2,  
 22 below.) This 8% penalty in some instances exceeds an aggregator’s gross margins. As an  
 23 additional example, SanDisk also receives royalties through the SD-3C entity from all the  
 24 companies selling SD cards in the United States, with the exception of Toshiba and Panasonic – the  
 25 other two members of the SD-3C consortium.

1 TABLE 2: SANDISK TECHNOLOGY ROYALTIES (EXCLUDING SD)



16. In addition to its licensing scheme, SanDisk exerts its power in the flash memory  
 17. technology market through partnerships and joint ventures, including the SD-3C entity described  
 18. above. Relatedly, PNY and a number of other entities were recently sued for alleged patent  
 19. infringement relating to SSD flash memory system products by a SanDisk-related company in *Solid*  
 20. *State Storage Solutions, Inc. v. Stec, Inc. et al.*, Civil Action No. 2:11-cv-391 (E.D. Tex.).  
 21. According to the corporate disclosure statement filed by plaintiff Solid State Storage Solutions, Inc.  
 22. (“S4”), SanDisk owns more than 10% of the stock in S4. S4 claims to be the owner of all rights,  
 23. title, and interest in and to the patents-in-suit in the S4 case. However, SanDisk’s ownership  
 24. interest in S4 demonstrates that SanDisk has a stake in patents related to flash memory technology  
 25. other than those patents listing SanDisk as the owner of record.

26. SanDisk’s monopoly power in the flash memory technology market gives SanDisk  
 27. the ability to exclude competition, obstruct entry, raise prices, restrict output and restrict innovation  
 28. in the downstream applications of flash memory technology—namely, the use of that technology in

1 flash memory chips, systems, and products.

2 63. There are high barriers to entry in this technology market that would prevent new  
 3 competition from entering for at least two years at a level sufficient to deter or counteract SanDisk's  
 4 exercise of market power. SanDisk's patents present a formidable barrier to any potential entrant.  
 5 In addition to the enormous research, development and capital expenditures such entry would  
 6 involve, the entrenched form factors, interfaces and industry standards present substantial obstacles  
 7 to any effort to shift away from the flash memory technology that SanDisk dominates.

8 64. On information and belief, other companies, such as Micron, do have alternative  
 9 flash memory technology and related intellectual property portfolios. Nevertheless, on information  
 10 and belief, approximately 90% of worldwide revenue for flash memory chips comes from chips that  
 11 use, or at least are licensed to use, SanDisk's technology. Moreover, SanDisk claims that 100% of  
 12 USB flash memory systems and products sold in the United States practice its patents.

13 65. In the same July 2007 earnings call referred to in paragraph 58, Dr. Harari was asked  
 14 to comment on the fact that "Micron seems pretty adamant that they're never going to have to pay  
 15 you guys a license – a royalty fee." He responded that "with regards to Micron, nothing has  
 16 changed as far as our thinking, which is, of course, not the same as their thinking. And we will  
 17 continue to work on that one."

18 66. By way of the conduct described in this Amended Complaint, SanDisk has prevented  
 19 manufacturers of flash memory systems and products (*i.e.*, aggregators) from being able to use the  
 20 technology offered by Micron or any other company. Third party flash memory technology and  
 21 related intellectual property rights have not prevented, and appear unable to prevent, the exercise of  
 22 monopoly power by SanDisk in the flash memory technology market.

### 23 ***Flash Memory Chip Market***

24 67. The flash memory chip market includes the manufacture and sale of chips that are  
 25 developed from flash memory technology for incorporation into systems, which, in turn, are used in  
 26 a wide variety of products (*i.e.*, consumer applications including USB drives, SD cards, CF cards,  
 27 and SSDs). (*See Table 1.*)

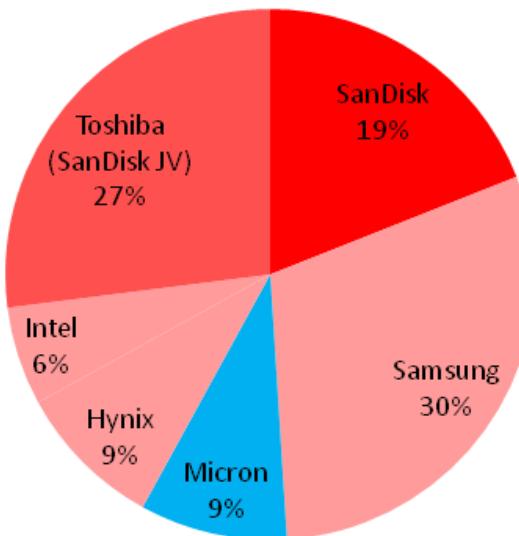
28 68. As the core element of flash memory, there are no reasonably interchangeable

1 economic substitutes for flash memory chips.

2 69. SanDisk has market power in the flash memory chip market that amounts to  
 3 monopoly power, or at least the dangerous possibility of gaining such monopoly power. On  
 4 information and belief, the flash memory chip output of SanDisk (in its joint venture with Toshiba)  
 5 accounts for approximately 46% or more of the worldwide market for flash memory chips, in terms  
 6 of unit sales. SanDisk recently reported in a 2013 annual stockholder meeting presentation that it is  
 7 responsible for "close to half of industry bit output (together with manufacturing partner Toshiba)."

8 70. In addition, on information and belief, SanDisk, together with its licensees,  
 9 accounted for close to 90% of worldwide revenue for flash memory chips in 2010 and 2011.

10 **TABLE 3: 2011 MARKET SHARE OF NAND FLASH MEMORY CHIPS**



20 Source: Jefferies Analyst Report

21 71. On information and belief, Micron is the only major participant in the flash memory  
 22 chip market that is not a SanDisk licensee, and it has a market share ranging from 8% to 15%.

23 72. There are high barriers to entry into the flash memory chip market that would  
 24 prevent new competition from entering for at least two years at a level sufficient to deter or  
 25 counteract SanDisk's exercise of market power. In order to develop a product that is a viable  
 26 alternative to flash memory chips incorporating the technology over which SanDisk claims patent  
 27 protection and has monopoly power, a firm would have to invest in significant research and  
 28 development, make a product that could fit into end-use products (e.g., the CF or USB form factors)

1 without substantial modification to those products and find appropriate manufacturing, distribution,  
 2 and sales facilities to bring the new flash memory chips to market.

3       73. In addition to the technological barriers, the enormous capital investments required  
 4 to manufacture chips is an additional barrier to both new entry and expansion by existing  
 5 manufacturers. Establishing the facilities for manufacturing chips—a fabrication plant or “fab”—  
 6 can cost billions of dollars. According to analysts, fabs to manufacture flash memory chips cost  
 7 anywhere from \$3 billion to \$8 billion, and can take years to build. A new entrant would not only  
 8 need to establish such manufacturing facilities, but would need to make substantial investments to  
 9 ramp up production to a volume sufficient to keep its costs competitive with existing manufacturers  
 10 of flash memory chips. As a result, no new entrants have emerged as competitors in the flash  
 11 memory chip market for many years.

12       74. In addition, expanding production in existing facilities itself is an extremely  
 13 expensive endeavor. In 2011, SanDisk reported investing over a billion dollars on tools for the  
 14 expansion of two existing fab facilities, and projected spending between \$650 million and \$1.15  
 15 billion in 2012 for additional fab investments. Existing competitors in the flash memory chip  
 16 market produce at or near their capacity, and it would require vast investment and a significant  
 17 period of time for them to expand existing facilities and ramp up production.

18       75. SanDisk itself has repeatedly acknowledged that there are high barriers to entry and  
 19 expansion in the flash memory chip market. For example, in March 2007, SanDisk’s co-founder  
 20 and then President Sanjay Mehrotra publicly stated that it is “pretty bloody for other new entrants to  
 21 get in” and supply flash memory chips.

22       76. In July 2007, Dr. Harari, was asked the following question on an earnings call: “You  
 23 have the advantage now where you have the captive suppliers [*i.e.*, SanDisk-Toshiba joint venture],  
 24 your competitors, you (sic) card competitors’ costs are going higher. How will you strategically  
 25 think about the decision of increasing market share versus increasing margin?” Dr. Harari  
 26 responded as follows: “I think we should try to maximize our margins, of course, but keep our  
 27 output at 100 utilization. And at this stage, it’s a little bit academic. It’s very difficult to, frankly, --  
 28 non-captive supply today is very, very expensive and definitely at this stage be [sic] difficult to

justify. To bring additional captive capacity on board to gain market share at depressed or close to zero, maybe even negative margins, is not what we would want to do at this time.”

77. On the same earnings call, Dr. Harari was asked if analysts “should get comfortable that now that pricing’s looking better, that everything’s not just going to come flying back online? Your competitors aren’t going to just turn on the spickets again and that you guys, along with Toshiba aren’t just going to increase the CapEx again?” Dr. Harari responded that “we’re talking about 220% increasing megabyte, tripling our megabyte shipments year-to-year. So we have the large numbers, the tier of large numbers actually working in our favor. And it’s becoming more and more difficult to double megabyte output because the basic numbers are now becoming very large, it’s very difficult for new players to come in and make a dent.”

78. On information and belief, Micron—a U.S. company based in Boise, Idaho—makes and sells alternative flash memory chips that do not incorporate the technology over which SanDisk claims patent protection and has monopoly power. Flash memory chips made by Micron compete in the same market as flash memory chips made by SanDisk and its licensees.

## ***USB Flash Memory System Market***

79. The second downstream market is the USB flash memory system market, which includes the assembly and sale of a combined chip and a controller that acts as an interface between the chip and the host computer, camera, etc. (*See Table 1.*) Although there are a variety of flash memory systems, the allegations herein are directed at the USB flash memory system market.

80. USB flash memory systems are an integral element of USB flash memory system products, and there are no reasonably interchangeable economic substitutes.

81. Participants in this market consist of (a) vertically-integrated flash memory firms, who make flash memory chips and controllers, and (b) aggregators, who purchase flash memory chips and controllers from others. In both cases, the system market participant combines the chip and the controller, either for use in its own products, or for sale to a third party.

82. The aggregators that compete in the system market are among the largest and most significant consumers of flash memory chips. For example, PNY purchased approximately \$187 million of flash memory chips in 2011.

83. Although it does not control the system market in terms of market share, SanDisk has leveraged its substantial market power in the flash memory technology market to force all companies who buy or sell in the system market in the United States to license SanDisk's technology or leave the market altogether. SanDisk thus has the power to exclude competitors in the market for systems.

84. In December 2006, Dr. Harari wrote an email to SanDisk employees expressing his belief that “over the next 10 years the balance of valuable IP will shift dramatically to system level IP” which “will become far more powerful as it will become impossible to sell Flash components without a systems solution.” Dr. Harari referred to Hynix “buying access” to this system level IP as a “huge insurance policy for them.”

85. There are substantial barriers to entry into the system market that would prevent new competition from entering for at least two years at a level sufficient to deter or counteract SanDisk's exercise of market power. This is because SanDisk has taken the position that all existing systems practice its technology and associated patents. In order to develop a viable alternative to systems that incorporate the technology over which SanDisk claims patent protection and has monopoly power, a firm would have to invest in significant research and development to devise a system that still meets industry standards and fits into end-use products (e.g., the USB form factor) without substantial modification to those products. In addition, a firm would need to develop appropriate assembly, distribution, and sales facilities to bring its systems to market.

## ***USB Flash Memory System Products Market***

86. The third downstream market is the USB flash memory system product market, which includes the sale of USB drives to U.S. consumers, typically through retailers. (See Table 1.) The participants in this market include vertically-integrated firms, aggregators, and relabelers. However, while relabelers compete in the sale of products, they do not compete in manufacturing them, and accordingly exert relatively little effect on pricing in the products market.

87. SanDisk has substantial market power in the USB flash memory system products downstream market. Upon information and belief, SanDisk-branded USB flash memory system products accounted for approximately 34 - 40% of retail sales in the United States in recent years.

1       88. As with systems, SanDisk's power in the USB products market is greater than that  
 2 which is indicated by its market share because SanDisk has leveraged its substantial market power  
 3 in the flash memory technology market to force all the significant companies who buy or sell in the  
 4 products market in the United States to enter into a license with SanDisk or leave the market  
 5 altogether. SanDisk thus has the power to exclude competitors in the market for USB flash memory  
 6 system products.

7       89. In addition, SanDisk's power in the market for USB flash memory system products  
 8 is greater than that which is indicated by its market share because it either sells directly or collects a  
 9 royalty on the purchase and sale of components (flash memory chips and systems) by its licensed  
 10 manufacturers to companies like PNY, and a second royalty on the purchase and sale of the same  
 11 components from aggregators such as PNY who purchase and integrate the components into  
 12 products that are sold to consumers. Accordingly, by leveraging its monopoly power in the flash  
 13 technology market and by its anticompetitive licensing scheme, SanDisk is able to collect a  
 14 percentage of every sale made by its licensed manufacturers as well as a percentage of every sale  
 15 made by its competitors, in addition to the revenue it derives from its own sale of SanDisk-branded  
 16 products.

17       90. The market for USB flash memory system products at retail is price point driven and  
 18 consumers are highly price sensitive. The margins for manufacturers of products are small. The  
 19 multiple royalties that SanDisk demands from manufacturers and sellers of flash memory chips,  
 20 systems, and products makes it harder for those manufacturers and sellers to be price competitive  
 21 against SanDisk when selling products to consumers.

22       91. On information and belief, SanDisk has asserted that forcing aggregators to accept its  
 23 license terms would raise the prices of aggregators' USB flash memory system products and, in  
 24 turn, would allow SanDisk to sell its own products at a higher price.

25       92. There are high barriers to entry in the market for USB flash memory system  
 26 products. For example, SanDisk takes the position that a license from it is required before a firm  
 27 can enter this market. In addition, it may take a firm many years to develop the necessary  
 28 distribution network, relationships and brand recognition to be a meaningful competitor in the

market for products.

93. No reasonably interchangeable economic substitutes for USB flash memory system products exist. Although there are other portable technologies available for storing and transferring data, such as CDs, DVDs, floppy disks, and external hard drives, none of these are reasonably interchangeable economic substitutes for USB flash memory system products and are declining rapidly in market share. The small size, relative durability, high storage capacity, and low cost of USB flash memory system products makes other types of more expensive, bulkier, less durable memory products poor economic substitutes. While SD and CF cards offer comparable size and capacity, they are used for different purposes and different host devices (*e.g.*, digital cameras, tablets and smart phones, rather than computers), and pricing changes do not appear to influence the pricing of USB flash memory system products.

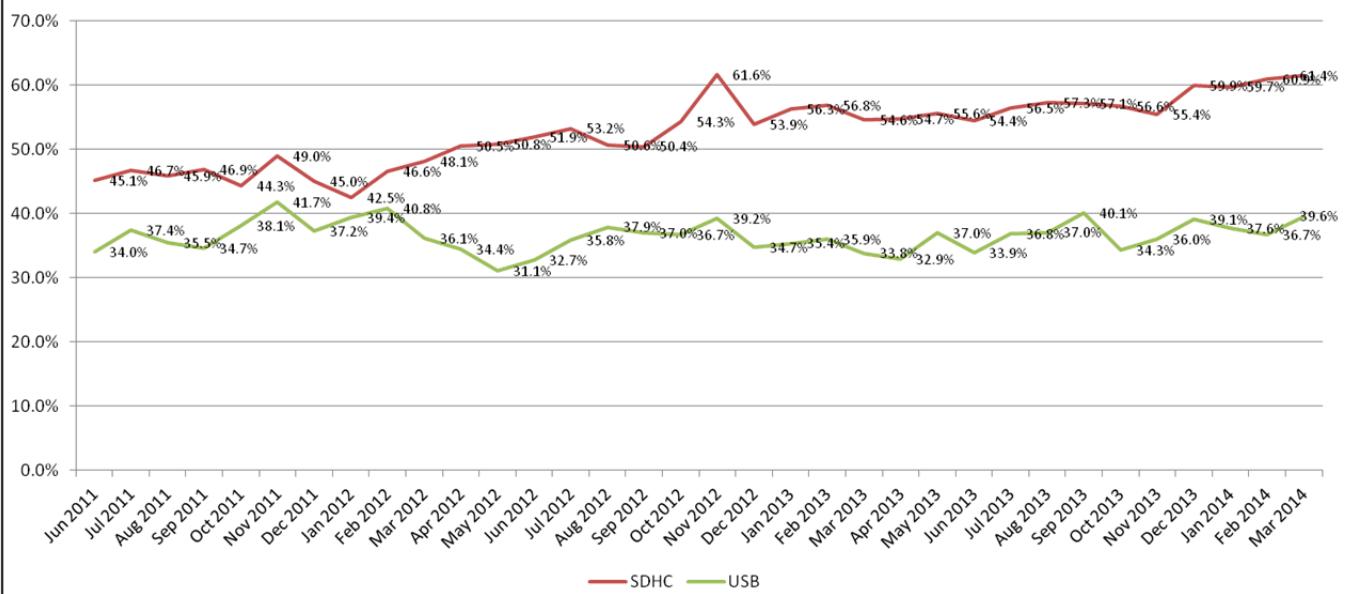
## ***SD Flash Memory System Products Market***

94. The fourth downstream market is the SD flash memory system product market, which includes the sale of SD cards and MicroSD cards<sup>1</sup> to U.S. consumers, typically through retailers. (See Table 1.) The participants in this market include vertically-integrated firms, aggregators, and relabelers. However, while relabelers compete in the sale of products, they do not compete in manufacturing them, and accordingly exert relatively little effect on pricing in the products market.

95. SanDisk has substantial market power in the SD flash memory system products downstream market. Upon information and belief, SanDisk-branded SD flash memory system products accounted for approximately 45% of retail sales in the United States in 2010, 47% of sales in 2011, and over 52% of sales in 2012. More recent data show that SanDisk's share continues to grow. In March of 2014, according to industry data, SanDisk accounted for over 60% of SD card sales.

<sup>1</sup> Unless otherwise noted, “SD cards” refers to both SD cards and MicroSD cards.

1 TABLE 4: SANDISK SD CARD AND USB MARKET SHARE (IN DOLLARS)



12 (Source: NPD)

13 96. As with systems, SanDisk's power in the SD card market is greater than that which  
 14 is indicated by its market share because SanDisk has leveraged its substantial market power in the  
 15 flash memory technology market to force all the significant companies who manufacture SD cards  
 16 into a worldwide royalty-bearing license. SanDisk thus has the power to exclude competitors in the  
 17 market for SD flash memory system products.

18 97. SanDisk has not merely used its power in the flash memory technology market to  
 19 obtain an advantage in the SD card market. It has used it to maintain a monopoly position in the SD  
 20 card market, or at a minimum, to create a dangerous probability of obtaining a monopoly position in  
 21 that market.

22 98. SanDisk's power in the market for SD flash memory system products has grown  
 23 swiftly in recent years, and appears likely to continue to grow. In addition to leveraging its power  
 24 in the technology market, SanDisk has been increasing its power in the SD card market by  
 25 aggressively pursuing exclusive dealing arrangements with key retailers. On information and  
 26 belief, SanDisk has entered into such arrangements with RadioShack, Costco, Sam's Club, BJ's,  
 27 CVS, and Walgreen's, and recently expanded its dominant position in the market by entering into  
 28 exclusive arrangements with Best Buy, Staples, and Walmart. Such arrangements cut off

1 competitors from more than 60% of the retail store distribution of SD cards, and reinforce  
 2 SanDisk's power in the SD card market. Indeed, on information and belief SanDisk has never lost  
 3 an exclusive arrangement once it has been established.

4 99. There are high barriers to entry in the market for SD flash memory system products.  
 5 For example, SanDisk and its SD-3C partners take the position that a license from SD-3C is  
 6 required somewhere in the manufacturing/distribution chain before a firm can enter this market.  
 7 This creates an enormous barrier to entry that SanDisk may deploy at any time by refusing to grant  
 8 additional licenses.

9 100. In addition, it may take a firm many years to develop the necessary distribution  
 10 network, relationships, and brand recognition to be a meaningful competitor in the market for flash  
 11 memory system products, including SD cards. On information and belief, it would be considerably  
 12 more expensive and difficult for a new entrant to build up these assets—a distribution network,  
 13 relationships, and brand recognition—than it was in the past when the incumbent firms obtained  
 14 their position. This is borne out by the actual behavior of the market. While SanDisk's market  
 15 share in SD cards has increased sharply in the last several years, PNY's share of the market has  
 16 declined rapidly as a result of SanDisk's illegal conduct.

17 101. More significantly, opportunities for distribution are limited because of the high  
 18 concentration levels among retail distribution outlets and the exclusive dealing barrier erected by  
 19 SanDisk. While some manufacturers of SD flash memory system products have attempted to sell  
 20 directly to consumers (*e.g.*, via company websites), this has always accounted for a small  
 21 percentage of total sales and no manufacturer has been successful in building a direct sales presence  
 22 that successfully competes with established retail distribution outlets. For instance, SanDisk, despite  
 23 its greater than 60% market share, does not even attempt to sell directly to consumers,  
 24 notwithstanding the greater margins it could earn if it did so.

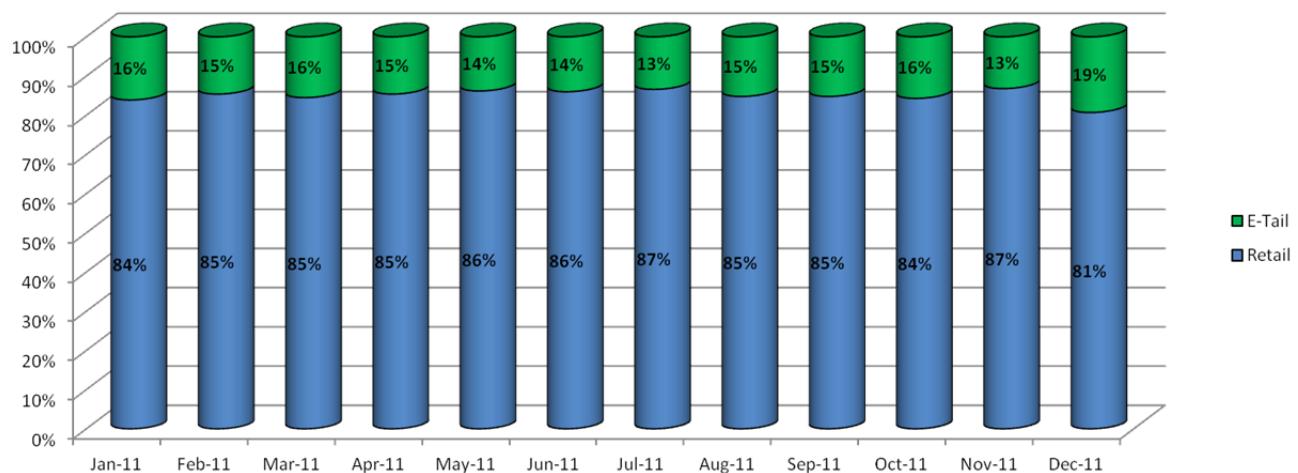
25 102. PNY's experience with direct sales confirms that the direct sales channel is not a  
 26 viable alternative to the retail channel. PNY has invested considerably in attempting to establish a  
 27 direct sales channel. It offers its products on its website, promotes them, and has invested in  
 28 fulfillment facilities that allow it to ship products quickly to consumers. PNY routinely offers better

1 prices through its direct channel—certainly better than the inflated prices consumers must pay at  
 2 retailers that have entered into exclusive dealing arrangements with SanDisk. Yet despite  
 3 significant financial and business investment PNY has had very little success with its direct sales  
 4 channel. Its total sales through the direct channel of SD cards in 2013 were under \$30,000.00 —  
 5 less than one part in a thousand of PNY's total SD sales.

6 103. On information and belief, no other major manufacturer of SD cards — including  
 7 giants like Toshiba, Samsung, and Micron — has had any meaningful success in building a direct  
 8 sales channel. One likely reason, discussed further below, is that SD cards are often purchased at  
 9 the point of sale along with devices like cameras and cell phones. Consumers prefer to purchase SD  
 10 cards at the same time so they can start using their new devices, rather than waiting for two or three  
 11 days for an SD card to be delivered through the mail. Because of the need for personalized service  
 12 and product demonstrations, established brick and mortar retailers have a substantial advantage over  
 13 internet sales.

14 104. SD cards are often sold as add-on sales for higher priced items like SD cameras or  
 15 cell phones. For instance, SanDisk bragged in its July 17, 2013, remarks to investors that over 90%  
 16 of purchasers of non-iOS phones purchase an SD card for their phone (“the attach rate”). Because  
 17 so many SD cards are purchased at retail as part of a bundle, customers are often insensitive to the  
 18 price of SD cards, do not consider alternative sources for SD cards, and are willing to pay an  
 19 inflated price at retail for their SD card. This “attach rate” is borne out by largely stagnant online  
 20 sales of SD cards.

21 105. Overall, the entire “e-tail” channel, which includes direct sales by manufacturers as  
 22 well sales by large retailers like Amazon.com remains very small. According to industry statistics  
 23 from NPD, traditional “brick and mortar” retailers accounted for 81% to 87% of SD card sales in  
 24 2011. Perhaps because the “e-tail” side was not significant, NPD stopped tracking the breakdown  
 25 between e-tail and brick and mortar retailers at the end of 2011.

1 TABLE 5: SDHC BRICK & MORTAR VS. E-TAIL SALES MIX  
210 (Source: NPD)  
11

12 106. There are also barriers to expansion by existing firms in the SD card market. As  
13 discussed, SanDisk has the ability to deprive a firm of its license from SD-3C, forcing that firm (at  
14 least according to SanDisk) to halt all manufacturing of SD cards. In addition, at certain times the  
15 components needed to make SD cards may be in short supply, as the (very limited) number of flash  
16 chip manufacturers fulfill commitments to companies like Apple that consume massive quantities of  
17 flash memory for solid state devices. Finally, the severe constraints on the distribution network  
18 imposed by SanDisk make it unrealistic for any other firm to expand its output in response to supra-  
competitive prices charged by SanDisk.

19 107. No reasonably interchangeable economic substitutes for SD flash memory system  
20 products exist. Although there are other portable technologies available for storing and transferring  
21 data, such as CDs, DVDs, floppy disks, and external hard drives, none of these are reasonably  
22 interchangeable economic substitutes for SD flash memory system products and are declining  
23 rapidly in market share. Their form factor is specifically matched to connect with the majority of  
24 digital cameras, and no other flash memory system products fit the SD card slots on such devices  
25 without adapters. Micro-SD cards are often sold with such adapters, but no other types of flash  
26 memory system products are. Micro-SD cards, without an adapter, fit a smaller device card slot  
27 than traditional SD cards, and tend to be used with tablets and smart phones, or with an adapter in  
28 digital cameras and other devices. While it is possible to use adapters that integrate an SD card or

1 Micro-SD card with a USB plug, it is not a typical practice among consumers, who do not consider  
 2 SD (or Micro-SD) cards substitutes for USB products.

3 ***Geographic Market***

4 108. The relevant geographic market is the United States. For the flash memory  
 5 technology market, by definition, United States patents extend patent protection only to the  
 6 geographic United States. For the downstream markets, the relevant geographic market includes the  
 7 flash memory chips, systems, and products that are available for sale in the United States, because,  
 8 upon information and belief, this is the geographic area within which U.S. consumers can  
 9 practicably turn for supply of such chips, systems, and products.

10 109. As to all of the relevant markets described herein, SanDisk's acquisition,  
 11 maintenance, or extension of monopoly power or lessening of competition (or attempts to do so) is  
 12 not due to growth or development as a consequence of a superior product, business acumen,  
 13 historical accident, or a lawful patent grant, but rather is the direct consequence of SanDisk's  
 14 unlawful conduct.

15 **SanDisk's Anticompetitive USB Licensing Scheme**

16 ***The Patent Infringement Lawsuits***

17 110. SanDisk has filed several lawsuits and other proceedings relating to accusations of  
 18 patent infringement for the primary purpose of extorting anticompetitive and uniform licenses from  
 19 its flash memory competitors.

20 111. SanDisk claims to control rights to patents necessary to manufacture and sell all  
 21 products that incorporate flash memory technology that are sold in the United States. Although  
 22 alternative designs exist that do not infringe some or all of SanDisk's patents, SanDisk has  
 23 repeatedly taken the position that any competitor manufacturing or selling products in the United  
 24 States containing flash memory technology must be practicing SanDisk's patents and thus should  
 25 enter into its standard license or face oppressive patent infringement litigation. That is the position  
 26 SanDisk has taken with PNY.

27 112. On October 24, 2007, SanDisk filed two complaints against PNY and dozens of  
 28 other competitors in the Western District of Wisconsin. *SanDisk Corp. v. Phison Electronics Corp.*

1 *et al.*, Civil Action No. 07-cv-0605 (W.D. Wis.); *SanDisk Corp. v. Phison Electronics Corp. et al.*,  
 2 Civil Action No. 07-cv-0607 (W.D. Wis.) (collectively, the “Wisconsin Actions”). Kingston  
 3 Technology Co., Inc. and Kingston Technology Corp. (collectively, “Kingston”) are the last  
 4 remaining defendants in the Wisconsin Actions.

5 113. In the Wisconsin Actions collectively, SanDisk alleged that PNY infringed U.S.  
 6 Patent Nos. 5,719,808 (the “’808 Patent”), 6,149,316 (the “’316 Patent”), 6,426,893 (the “’893  
 7 Patent”), 6,757,842 (the “’842 Patent”), 6,763,424 (the “’424 Patent”), 6,947,332 (the “’332  
 8 Patent”), and 7,137,011 (the “’011 Patent”).

9 114. Additionally, on December 6, 2007, and at the request of SanDisk, the United States  
 10 International Trade Commission initiated an investigation entitled *In the Matter of Certain MLC*  
 11 *Flash Memory Device Controllers, Drives, Memory Cards, and Media Players and Products*  
 12 *Containing Same*, Inv. No. 337-TA-619 against PNY, Kingston, and dozens of other entities (the  
 13 “ITC Investigation”).

14 115. In the ITC Investigation SanDisk alleged that PNY infringed the ’808, ’893, ’424,  
 15 ’332, and ’011 Patents.

16 116. The parties sued in the Wisconsin Action and named in the ITC Investigation  
 17 included essentially all of the significant USB flash memory companies in the United States,  
 18 including : A-Data Technology Co., Ltd.; A-Data Technology (USA) Co., Ltd.; Acer, Inc.; Add-On  
 19 Computer Peripherals, Inc. (d/b/a EP Memory); Add-On Computer Peripherals, LLC (d/b/a ACP-  
 20 EP Memory); Add-On Technology Co.; Apacer Memory America, Inc.; Apacer Technology Inc.;  
 21 Behavior Tech Computer Corp.; Behavior Tech Computer USA Corp. (d/b/a BTC USA); Buffalo,  
 22 Inc.; Buffalo Technology (USA), Inc.; Chipsbank Microelectronics Co., Ltd.; Chipsbank  
 23 Technology (Shenzhen) Co., Ltd; Chipsbrand Microelectroncis (HK) Co., Ltd; Corsair Memory,  
 24 Inc.; Dane-Elec Corp. USA; Dane-Elec Memory S.A.; Deantusaiocht Dane-Elec TEO (d/b/a  
 25 Intervalle Corporation and d/b/a Dane-Elec Manufacturing USA); Edge Tech Corp. (d/b/a  
 26 Peripheral Enhancements Corporation); Emprex Technologies Corp.; Imation Corp.; Imation  
 27 Enterprises Corp.; Infotech Logistic; Infotech Logistic, LLC (d/b/a Supertron Memory); Interactive  
 28 Media Corp. (d/b/a Kanguru Solutions); ITE Technologies, Inc.; Kaser Corp.; Kingston Technology

1 Co., Inc.; Kingston Technology Corp.; LG Electronics, Inc.; LG Electronics U.S.A., Inc.; Melco  
 2 Holdings Inc.; Memorex Products, Inc.; MemoSun, Inc.; Payton Technology Corp.; Phison  
 3 Electronics Corp.; PNY Technologies, Inc.; Power Quotient International Co., Ltd.; Power Quotient  
 4 International (HK) Co., Ltd.; PQI Corp.; Silicon Motion Inc. (California); Silicon Motion Inc.  
 5 (Taiwan); Silicon Motion International, Inc.; Silicon Motion Technology Corp.; Skymedi Corp.;  
 6 Synergistic Sales, Inc.; Syscom Development Co., Ltd.; Synergistic Sales, Inc.; Transcend  
 7 Information Inc. (California, U.S.A.), Transcend Information Maryland, Inc., Transcend  
 8 Information, Inc. (Taiwan); Trek 2000 International, Ltd.; TSR Silicon Resources, Inc.; USBest  
 9 Technology, Inc.; Verbatim Americas; Verbatim Corp.; Welldone Co.; Zotek Electronic Co., Ltd.  
 10 (d/b/a Zodata Technology Ltd.).

11 117. Upon initiating the Wisconsin Action and requesting the ITC Investigation, SanDisk  
 12 advised PNY and, on information and belief, the other parties named in the Wisconsin Action and  
 13 ITC Investigation, that the only way SanDisk would settle the actions was through a “standard” and  
 14 non-negotiable license agreement with each defendant. For instance, Dr. Eli Harari, the founder  
 15 and then Chief Executive Officer of SanDisk told PNY that it would need to sign a “standard  
 16 license” and that SanDisk does not “have the room to customize agreements for each licensee.”  
 17 PNY understood that SanDisk would pursue PNY in litigation for as long as necessary to compel  
 18 PNY to sign the standard license.

19 118. Just days after initiating the Wisconsin Action and requesting the ITC Investigation,  
 20 SanDisk received an email from Silicon Systems stating “congrats to you and the team for filing  
 21 this action. It is great news for your licensees and for the industry as a whole.” Richard Chernicoff,  
 22 then SanDisk’s Senior Vice President of Business Development, forwarded this email to Sanjay  
 23 Mehrotra, the current President and Chief Executive Officer of SanDisk, and to other SanDisk  
 24 employees commenting “I will not answer of course – but this is more evidence as to why we have  
 25 to execute this program across the board.”

26 119. SanDisk repeatedly threatened its flash memory competitors with patent  
 27 infringement litigation to force them to sign its standard license. For example, during 2007  
 28 settlement negotiations with Memorex-Imation, SanDisk presented a powerpoint slide stating that

1 “SanDisk protects its investment in intellectual property through licensing and, when necessary  
 2 litigation,” and provided the following list of patent infringement actions it has filed against its  
 3 competitors: “1996 – SanDisk v. Samsung (ITC, NDCA); 1998: SanDisk v. Lexar Media (NDCA);  
 4 2001: SanDisk v. Micron (NDCA); 2001: SanDisk v. Viking et al. (NDCA); 2001: SanDisk v. PQI-  
 5 USA (NDCA); 2001: SanDisk v. Memorex, Protec, PQI, Ritek (NDCA); 2002: SanDisk v.  
 6 Samsung; 2004: SanDisk v. STMicro (ITC, NDCA, EDTX); 2007: SanDisk v. Imation (NDCA).”

7 120. SanDisk’s threat of expensive and continual patent infringement litigation to extract  
 8 coercive and anticompetitive licenses was highly credible. SanDisk claims to have a portfolio of  
 9 over 1,700 patents (containing well over 10,000 claims), but sued PNY on only a limited number of  
 10 claims from seven patents. SanDisk signaled it could break up cases into an arbitrary and large  
 11 number by bringing two separate cases, Nos. 07-cv-0605 and 07-cv-0607 in Wisconsin, as well as  
 12 requesting the ITC Investigation. PNY faced the prospect of a stream of financially debilitating  
 13 lawsuits brought against it anywhere in the country by an extremely well-heeled adversary. For  
 14 instance, when Kingston did not accede to SanDisk’s threats, SanDisk brought an additional lawsuit  
 15 against Kingston entitled *SanDisk Corp. v. Kingston Technology Co., Inc. et al.*, Civil Action No.  
 16 10-cv-00243 (W.D. Wis.) (the “Kingston Action”). In the Kingston Action, SanDisk alleged that  
 17 Kingston infringed five more patents: U.S. Patent Nos. 7,397,713 (the “713 Patent”), 7,492,660  
 18 (the “660 Patent”), 7,532,511 (the “511 Patent”), 7,646,666 (the “666 Patent”), and 7,657,702  
 19 (the “702 Patent”). Upon information and belief, SanDisk would have brought a lawsuit against  
 20 PNY alleging infringement of the patents in the Kingston Action had PNY not entered into the  
 21 License.

22 121. SanDisk failed in its attempts to enforce any of the seven patents asserted in the  
 23 Wisconsin Actions and ITC Investigation. One defendant, Kingston, opposed SanDisk through  
 24 summary judgment. The Wisconsin District Court and/or the ITC found that the ‘424 Patent was  
 25 not infringed, that the ‘011 Patent was invalid for obviousness, that the ‘316 Patent was not  
 26 infringed, and that the ‘842 Patent was not infringed. SanDisk withdrew the ‘893, ‘808, and ‘332  
 27 Patents prior to the hearing.

28 122. SanDisk’s strategy of filing abusive patent infringement litigation was evidenced in

1 December 2006 when a SanDisk employee seeking to negotiate a partnership with Hynix (and  
 2 discourage Hynix from partnering with Toshiba) told Hynix employees that Toshiba “does not  
 3 know how the (sic) fight IP at (sic) US courts while we are expert on that. It is not what you have  
 4 but how you use it!”

5 123. In December 2007, PNY’s CEO Gadi Cohen met with SanDisk’s then-CEO, Dr. Eli  
 6 Harari, to discuss entering into a license to resolve patent infringement litigation filed by SanDisk  
 7 against PNY. Although competitors, Dr. Harari and Mr. Cohen had known each other for many  
 8 years and enjoyed a generally cordial relationship. Dr. Harari was anxious to lock PNY into the  
 9 License before the Consumer Electronics Show (CES) in January 2008. SanDisk’s plan was to  
 10 publicize and use the License with PNY (its largest aggregator competitor) as an exemplar to  
 11 pressure other smaller competitors to enter into similar anticompetitive and uniform licenses.  
 12 Dr. Harari asked Mr. Cohen to “do him a favor” and sign the License.

13 124. SanDisk’s intent to quickly execute and publicize the PNY License is evidenced by a  
 14 December 19, 2007 email from SanDisk’s outside counsel, Michael Ladra, to PNY’s then outside  
 15 counsel, William J. Heller, stating that “I can confirm agreement on the [settlement] terms you set  
 16 forth with one clarification. While the agreement will be confidential, it is critical to SanDisk to  
 17 have an agreed press release. I have attached the proposed license agreement and a draft press  
 18 release. I trust that you will find both acceptable. . . . We are prepared to move quickly to get this  
 19 signed.”

20 125. PNY attempted to negotiate the terms of the License with SanDisk. While some  
 21 minor changes were accepted, all requests for changes to material terms such as licensed products,  
 22 royalties, royalty base, and royalty structure were summarily rejected by SanDisk. For instance,  
 23 PNY objected to paying royalties in countries where SanDisk had no patents and requested a list of  
 24 countries in which SanDisk had patents. SanDisk refused to provide the list and responded that  
 25 “SanDisk cannot accept a change to this paragraph” requiring a worldwide royalty. The License  
 26 was effectively presented to PNY on a take-it-or-leave-it basis. Faced with this dire economic  
 27 threat, PNY acceded to the License and its mandatory terms on January 2, 2008. A true and correct  
 28 copy of the License is attached hereto as Exhibit A.

1       126. SanDisk's intent to quickly publicize the License was further demonstrated by an  
 2 email the next day (January 2, 2008), from Sanjay Mehrotra, the current President and Chief  
 3 Executive Officer of SanDisk, to several SanDisk employees stating "Very Nice. Congratulations.  
 4 When is the press release?"

5       127. The next day, January 3, 2008, SanDisk's outside counsel sent the following email  
 6 and attachment to all of the remaining defendants/respondents in the Wisconsin Action and the ITC  
 7 Investigation: "As many of you are aware, SanDisk and PNY have successfully concluded their  
 8 licensing negotiations. The link to the press release is <http://www.sandisk.com/Corporate/PressRoom/PressReleases/PressRelease.aspx?ID=4070>. This follows the recent settlement with  
 10 Trek. SanDisk believes that these recent settlements confirm that licensing SanDisk's patents if far  
 11 wiser than exposure to the significant risk and cost of litigation. SanDisk is willing, for a limited  
 12 time, to offer a standard card license without the normal requirement of a license fee or payment for  
 13 past infringement. **The only conditions on this offer are that this standard license be executed**  
 14 **with no changes to the terms** and that the offer be accepted prior to January 22, 2008. A copy of  
 15 the standard license agreement is attached. This offer will be withdrawn after the 22<sup>nd</sup>. Please let  
 16 me know if you wish to take advantage of this proposal" (emphasis added).

17       128. On January 15, 2008, the court entered a stipulation of dismissal of PNY, with  
 18 prejudice, in both the Wisconsin Actions. PNY also was dismissed from the ITC Investigation in  
 19 March 2008.

20       129. Many of the defendants/respondents in the Wisconsin Action and the ITC  
 21 Investigation similarly settled with SanDisk on what have turned out to be anticompetitive terms.  
 22 On information and belief, many, if not all, of the other defendants/respondents were forced to enter  
 23 licenses with the same or substantially the same substantive terms. In a press release dated April  
 24 10, 2009, SanDisk boasted that of the 25 companies against whom it asserted patents in the ITC,  
 25 "the following companies entered into settlement and license agreements with SanDisk: Trek 2000  
 26 International, Ltd., PNY Technologies, Inc., Verbatim Corp., Verbatim Americas, Add-On  
 27 Computer Peripherals, Inc. and Add-On Computer Peripherals, LLC (collectively, Add-On USA),  
 28 Edge Tech Corporation, Infotech Logistic, Interactive Media Corp. (Kanguru), Kaser Corporation,

1 TSR Silicon Resources Inc., and Welldone Company" and that "the following companies entered  
 2 into settlement agreements that included consent orders where the companies agreed to limit their  
 3 imports of specified products to the United States to SanDisk licensed products: A-DATA  
 4 Technology Co., Ltd. and A-DATA Technology (USA) Co., Ltd. (collectively, A-DATA entities),  
 5 Melco Holdings Inc., Buffalo Inc., and Buffalo Technology (USA), Inc. (collectively, Buffalo  
 6 entities) and Corsair Memory, Inc." SanDisk also stated that it "obtained judgments against the  
 7 following companies: Zotek Electronic Co., Ltd. dba Zodata Technology Limited; Infotech  
 8 Logistic, LLC dba Supertron Memory; Add-On Technology Co.; Behavior Tech Computer Corp.;  
 9 Emprex Technologies Corp.; and Behavior Tech Computer USA Corp. dba BTC USA."

10 130. In addition, on information and belief, SanDisk either has or has had license  
 11 agreements related to flash memory technology, chips, systems, and/or products with other  
 12 companies, including but not limited to, Hitachi Semiconductor and Integrated Circuits Group, Lead  
 13 Data, Inc., Lexar Media, Inc., Renesas Technology Corp., Sharp Corporation, Silicon Storage  
 14 Technology, Inc., Silicon Systems, Inc., SmartDisk Corporation, Sony Corporation, TDK  
 15 Corporation, Methode Electronics, Matsushita, Invox, China Movtek, M-Systems, SMART  
 16 Modular Technologies, Western Digital and AT&T.

17 131. The uniform License that SanDisk forced PNY and others to sign contains a number  
 18 of anticompetitive terms — indeed, a virtual catalogue of every known form of patent misuse and  
 19 overreaching provision that can harm competition. This scheme has no pro-competitive  
 20 justification, or at least no pro-competitive justification that outweighs the harm to competition and  
 21 consumers.

### 22 *Tying Arrangement*

23 132. On its face, the PNY License purports to license only a limited set of patent claims,  
 24 which are defined as the subset of SanDisk's patent claims directed to the creation of USB flash  
 25 memory **systems**, *i.e.*, the combination of a flash memory **chip** and controller. The License does  
 26 not purport to license to PNY the subset of SanDisk's patent claims directed toward flash memory  
 27 chips, and indeed purports to expressly exclude such claims.

28 133. Under the License, PNY is required to pay a [REDACTED] royalty (capped at [REDACTED] per unit)

1 for the privilege of connecting a controller to a flash memory chip and thereby creating a USB flash  
 2 memory system. The royalty is assessed on PNY's worldwide net sales.

3       134. However, the financial terms of the license also have the effect of requiring PNY to  
 4 purchase flash memory chips from SanDisk or from another seller licensed by SanDisk to make  
 5 them. This is because if PNY purchases flash memory chips from someone other than SanDisk or  
 6 one its licensees, it must pay an additional 8% uncapped royalty on the cost of the unlicensed  
 7 memory chips. (The █ incremental royalty applies to MLC flash memory chips, which are the  
 8 primary form of flash memory chips used in USB flash memory systems. There is also a █  
 9 incremental royalty applicable to the less commonly used SLC flash memory chips). Because the  
 10 only unlicensed flash memory chip manufacturer is Micron, this means that PNY must pay the  
 11 incremental royalty if and only if it buys flash memory chips from Micron.

12       135. Because of the magnitude of this additional 8% uncapped royalty, essentially tripling  
 13 its royalty costs, the only viable economic option for PNY or any other aggregator forced to sign  
 14 SanDisk's uniform license is to purchase flash memory chips from SanDisk or from a manufacturer  
 15 licensed by SanDisk. In fact, in some instances the 8% penalty exceeds the gross margins of an  
 16 aggregator like PNY.

17       136. The requirement that a licensee purchase a staple good (flash memory chips) from  
 18 the licensor (or from entities in which the licensor has an economic interest) as a condition of  
 19 licensing a patent constitutes a classic tying arrangement.

20                   ***Collection of Multiple Royalties In Violation Of Patent Exhaustion Doctrine***

21       137. SanDisk refuses to specify what patents are included in the License with PNY and  
 22 other aggregators, and instead relies only on general language purporting to describe a "field of  
 23 use."

24       138. Likewise, when SanDisk licenses flash memory chip manufacturers, it refuses to  
 25 specify what patents in their 1,700 patent portfolio are included in their license, and instead relies  
 26 only on general language purporting to describe a field of use. The field of use described in  
 27 SanDisk's licenses with flash memory chip manufacturers overlaps the field of use described in the  
 28 aggregators' licenses. For example, similar to PNY's license, SanDisk's licenses with Intel and

1 Toshiba both license SanDisk's patents pertaining to the manufacture and sale of USB flash  
 2 memory systems and products.

3 139. SanDisk accordingly is attempting to license the same patents to both chip  
 4 manufacturers and to aggregators like PNY.

5 140. As a result of licensing the same patents to both chip manufacturers and aggregators,  
 6 SanDisk receives double royalties on the sale of the same component parts from the license of the  
 7 same patent—one royalty from its licensed manufacturers on their sales of flash memory chips, and  
 8 a second royalty from aggregators like PNY for their sale of flash memory chips in the form of USB  
 9 flash memory system products.

10 141. As discussed herein, a USB flash memory system is comprised of a flash memory  
 11 chip, controller, and other component parts. A flash memory chip by itself has no economic value  
 12 to an end user. The economic value of a flash memory chip is necessarily related to and dependent  
 13 upon its incorporation into a USB flash memory system (or other flash memory system), which, in  
 14 turn, is then incorporated into a USB flash memory system product.

15 142. SanDisk is entitled to receive a royalty for the purchase and use of a flash memory  
 16 chip in a system and/or product only once.

17 143. The double royalty that SanDisk imposes on its two levels of licensees (chip  
 18 manufacturers and aggregators) violates the patent exhaustion doctrine, which provides that the first  
 19 authorized sale of a patented product in commerce exhausts the patentee's patent protection as to  
 20 that technology. The patent exhaustion doctrine prevents SanDisk from collecting both: (1) a  
 21 “first” royalty on the sale by a licensed manufacturer to an aggregator of a component part covered  
 22 by a patent; and (2) a “second” royalty on the subsequent resale of the same component part  
 23 covered by the same patent that the aggregator has integrated into a finished USB flash memory  
 24 system product.

25 ***Mandatory Portfolio Licensing***

26 144. SanDisk licenses its patents only on a portfolio basis. SanDisk refuses to license its  
 27 patents individually or to license to an aggregator only those specific patents needed to aggregate  
 28 flash memory chips with a controller.

## ***Collection of Royalties Whether Or Not Patents Are Practiced***

145. SanDisk imposes a royalty on all of an aggregators' net sales, whether or not any licensed patents are practiced. SanDisk refuses to modify its license to assess a royalty only to the extent patents are actually practiced.

## ***Collection of Royalties in Territories Where SanDisk Does Not Have Patent Rights***

146. SanDisk's patent portfolio includes patents related to flash memory technology in the United States and in a handful of foreign jurisdictions. However, SanDisk does not have such patents in the majority of jurisdictions around the world.

147. Under the terms of SanDisk's licensing program, licensees must pay a royalty on all flash memory-related products sold worldwide, even on sales in those jurisdictions where SanDisk has no patent rights. The practical effect of this licensing scheme is that any company seeking to sell in the United States market must pay royalties to SanDisk on its worldwide sales of flash memory-related products.

148. Patent rights in each jurisdiction in which those rights are granted constitute separate relevant products because they are not reasonably interchangeable economic substitutes. A patent right gives the holder of that patent the exclusive right to use (or to decide who can use through licensing) a specific technology for a specified amount of time in the jurisdiction that issued the patent and does not provide any rights to the patent holder outside the granting jurisdiction. In the jurisdictions in which SanDisk does not have patents related to flash memory technology, it does not have any right to claim any royalty from PNY at all.

## ***Collection of Royalty After Patent Expiration***

149. By forcing licensees to license its entire portfolio of patents, instead of specific patents, SanDisk is able to and does charge post-expiration royalties. For example, three of the patents on which SanDisk sued PNY in the Wisconsin Action have now expired. The '316 Patent and the '842 Patent both expired on April 13, 2009, and the '332 Patent expired on April 11, 2011. Many other patents that were in force at the time the parties entered into the License likely also expired. However, there was no reduction in the royalty charged by SanDisk after the expiration of certain patents, and no opportunity for PNY at any time to license SanDisk's patents only for the

1 term of the patents.

2 ***Collection of Royalty On Invalid Patents***

3 150. By forcing licensees to license a broad portfolio of patents, instead of specific  
 4 patents, SanDisk is able to charge royalties on invalid patents. For instance, the only claim in the  
 5 '011 Patent asserted by SanDisk against Kingston was found to be invalid. However, there was no  
 6 reduction in the royalty charged by SanDisk after one of its patents was held invalid, and no  
 7 opportunity for PNY at any time to license only SanDisk's valid patents.

8 ***Collection of Royalty On Patents That Are Not Infringed***

9 151. By forcing licensees to license a broad portfolio of patents, instead of specific  
 10 patents, SanDisk is able to charge royalties on patents that have been adjudicated not to be  
 11 infringed. For instance, in the Wisconsin Action and/or the ITC Investigation, Kingston's practices  
 12 as an aggregator of combining a controller with a flash memory chip was found not to infringe the  
 13 '424 Patent, the '316 Patent, or the '605 Patent as a matter of law. PNY as an aggregator also does  
 14 not infringe these patents. However, SanDisk refuses to license to PNY only the patents required  
 15 by PNY and refuses to reduce the royalty charged to PNY to account for patents that are not  
 16 infringed as a matter of law.

17 ***SanDisk Requires Licensees to Cross-License Their Future Innovations on a Worldwide Royalty-  
 18 Free Basis***

19 152. SanDisk also requires licensees to grant back a cross-license covering any new  
 20 technology developed by the licensee if the technology is covered by the scope of the portfolio  
 21 license on a worldwide, royalty-free basis. Thus, even if a licensee develops or obtains access to an  
 22 alternative technology that it could use to achieve patent independence from SanDisk, the licensee  
 23 would still be required to pay a royalty to SanDisk on any sales of the new product and SanDisk  
 24 would have the right to use the new technology on a worldwide, royalty-free basis.

25 153. The effect of the cross-license provision is to maintain and reinforce SanDisk's  
 26 monopoly in the flash memory technology market by reducing the incentive for licensees to develop  
 27 their own technological solutions and patent portfolios.

## **Other Exclusionary Acts by SanDisk**

## *Threats to Retailers*

154. On information and belief, SanDisk has threatened retailers carrying products containing flash memory chips not licensed or manufactured by SanDisk. For instance, in another case pending in this district, *Ritz Camera & Image, LLC v. SanDisk Corp., et al.*, Case No. CV 10-02787 HRL, the plaintiffs allege that “SanDisk has threatened” direct purchasers of flash memory system products “with the prospect they will be left holding large quantities of unusable flash memory products” and that if they purchase flash memory system products from SanDisk’s unlicensed competitors “they will be made to purchase flash memory at disadvantageous prices and terms if they are later forced to turn to SanDisk to receive the necessary flash memory for their products.”

155. On information and belief, anticompetitive communications with retailers were part of a broader SanDisk strategy “to leverage the fact we are suing companies to increasing market share of the retail.”

156. On information and belief, SanDisk has also threatened customers of controller manufacturers and has stated that its filing of an infringement action against various controller manufacturers in 2007 was “sending not only the manufacturers of the controllers but some of the customers a message,” as those customers “may be responsible for damages if they use what we consider to be infringing IP and we have now notified them.”

### *Exclusive Dealing*

157. On information and belief, SanDisk has required retailers to enter into exclusive dealing arrangements with it for USB flash memory system products, SD flash memory system products, and other removable memory products. These exclusive dealing arrangements preclude the affected retailers from carrying USB flash memory system products and SD flash memory system products made by PNY and other competitors. Such exclusive dealing arrangements have, at relevant times, precluded RadioShack (with over 4,000 United States locations), CVS (with over 7,000 United States locations), and Walgreens (with over 8,000 United States locations) from carrying PNY's products. Each of these retailers has expressly communicated to PNY that it is

1 precluded from even *entertaining* a proposal from PNY because of its exclusive arrangement with  
 2 SanDisk. This is exactly SanDisk's strategy.

3 158. SanDisk's goal is clear and succinctly stated in its internal communications: keep  
 4 competition out; secure all pegs (all retail displays); raise pricing; and become an *exclusive* provider  
 5 and remain as such.

6 159. In fact, although SanDisk now represents to the Court that it is not an exclusive  
 7 provider, internal documents show that as early as 2007 SanDisk considered itself to be exclusive at  
 8 Costco and RadioShack. SanDisk has remained exclusive at those retailers through today, and has  
 9 continued to amass more exclusive agreements and market control. In short, although SanDisk  
 10 claimed it did not have a single exclusive arrangement, that is simply not true. As PNY has  
 11 demonstrated here and will demonstrate at trial, SanDisk is engaged in multiple exclusive dealing  
 12 arrangements with retailers—a fact confirmed by many of the retailers themselves. Indeed, the  
 13 word “exclusive” appears 92,429 times in SanDisk’s document production to date, and a search for  
 14 words beginning with “exclusiv” returns 17,528 documents.

15 160. SanDisk, through its high level executives including but not limited to Judy Bruner  
 16 (chief financial officer, executive vice president of administration, and member of executive  
 17 committee) and Sanjay Mehrotra (president, chief executive officer, co-founder, and director) has  
 18 said the following about retail since it began to employ this strategy to control markets and destroy  
 19 competition in retail:

- 20 • “Our 2013 retail revenue has a new annual record with our retail products achieving  
 21 substantial share gains in key markets globally.” -Sanjay Mehrotra, January 22, 2014.
- 22 • “And our retail business, even though I didn’t have time in my presentation to spend a lot of  
 23 time on that, you’ll hear more about that from Shuki, our retail business is a very important  
 24 business as well to SanDisk. It really is the face of the company to the consumer. We have  
 25 a brand that is a household name across the world. And we have very strong profit  
 26 contribution from that business. So growing share in retail continues to be an important  
 27 priority for us, And we have been doing that very well across most geographies over the past  
 28 few years.” -Sanjay Mehrotra, January 22, 2014.

- “I would say our retail products actually command a very strong price per gigabyte. So I think when you are talking about these big divergences and you mention retail, I think you’re talking more about what’s being sold on the spot market in terms of components or cards sold to a white-label provider or wafer prices sold on the spot market. And actually, we, as I mentioned, have pulled away somewhat and we’ve reduced our supply allocation to those markets in order to prioritize our supply to market, such as embedded products and SSD products, as well as our branded retail where we command a strong price premium.”

–Judy Bruner, January 22, 2014.

- “In this presentation today, I’m going to focus on the retail business, and I’d like to share 3 things with you. The first thing is how strong our business is, how well we have done; the second one is how big an opportunity we see in the retail market for us; and the third one, and most important, how we are going to leverage on the strong business that we have in order to gain more share and to grow our business profitably as well.” –Shuki Nir, January 22, 2014.
- “Our strong first quarter results reflect the benefit of our broadening product portfolio and our disciplined capacity management. The key highlights of the quarter included our SSD product revenue, which grew over 200% on a year-over-year basis, and the continued strengthening of our global retail channels which produced year-over-year revenue growth of 34%.” -Judy Bruner, January 22, 2014.

161. Additionally, as evidenced by SanDisk's internal meeting agendas and other internal SanDisk documents, SanDisk places an emphasis on driving the retail business. A 2008 internal SanDisk email states, "Where possible we need to leverage the fact we are suing companies to increasing [sic] market share of the retail." SanDisk is laser-focused on accomplishing and accelerating exclusivity in retail as a method of keeping PNY out of the SD flash memory products market.

162. SanDisk's market share in U.S. retail channels was 32% in 2007 for SD and MicroSD. SanDisk's stated primary goal was to increase this market share.

163. As early as 2008, SanDisk set upon a path to destroy all SD competition in the U.S.

1 retail SD market.

2 164. SanDisk's efforts at exclusivity and market control began to reap benefits almost  
 3 immediately. According to internal documents SanDisk was able to notch increases in share by  
 4 over [REDACTED] to [REDACTED] in flash cards by [REDACTED] – and selling at a higher average retail sale  
 5 price than the market. The elimination of competition was beginning to increase consumer cost and  
 6 decrease market entry.

7 165. While seeking to establish (and establishing) exclusive contracts, SanDisk also began  
 8 controlling ad shares (percentage of ads retailers run regarding a company's product).

9 166. By the fourth quarter of 2009, SanDisk's ad share at Staples grew from [REDACTED] in Q4  
 10 2008 to [REDACTED] PNY had dropped from [REDACTED] to [REDACTED], and Hewlett Packard had dropped from [REDACTED] to  
 11 [REDACTED]

12 167. By April 2012, SanDisk internal documents show that SanDisk had gained share in  
 13 SD and MicroSD cards to [REDACTED], and suffered only a decline in USB sales where it had not yet been  
 14 able to prevent market entry.

15 168. SanDisk accomplished this explosive growth in market share through exclusivity –  
 16 deals it offered with massive hard dollar incentives, corresponding penalties for non-exclusivity,  
 17 and economic investments that make no sense for any rational economic action except to create a  
 18 monopoly. For example, an internal SanDisk email from September 2012 shows that SanDisk was  
 19 prepared to offer Rite Aid nearly [REDACTED] in marketing development funds and markdown  
 20 funding in exchange for exclusivity, which presented a [REDACTED] “incremental opportunity” for  
 21 SanDisk. In other words, SanDisk was prepared to pay Rite Aid nearly [REDACTED] in exchange  
 22 for [REDACTED] in business.

23 169. Indeed, despite losing over a billion dollars in 2009, SanDisk elected to increase  
 24 pricing and provide exclusive contract incentives that were equal to or higher than the resulting  
 25 increase in revenue that SanDisk expected to gain – all in a transparent attempt to control the market  
 26 and pricing.

27 170. Contrary to statements to the Court, SanDisk repeatedly characterized its efforts with  
 28 retailers as a drive to establish exclusivity. Many of the SanDisk internal documents discussing

1 exclusivity at retailers specifically single out PNY as the target of SanDisk's single vendor strategy.

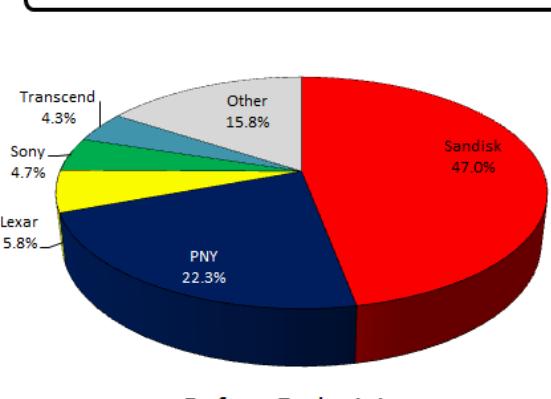
2 171. More recently, SanDisk has drastically expanded the proportion of the market  
 3 encompassed by its exclusive dealing arrangements. In June 2013, PNY learned that SanDisk  
 4 would be the exclusive provider of Best Buy's SD cards for its Digital Imaging category as of  
 5 August 2013. In November 2013, PNY learned that SanDisk would be the exclusive provider of  
 6 SD cards in Staples stores beginning in February 2014. Upon information and belief, in addition to  
 7 the arrangements continuing in place with RadioShack and CVS, SanDisk has exclusive dealing  
 8 arrangements in place with Costco, Sam's Club, BJ's, and Walgreens as well. Collectively,  
 9 SanDisk has thus made itself the exclusive provider for SD cards in stores accounting for  
 10 approximately half of all U.S. retail SD card sales.

11 172. In July 2011, SanDisk had a dollar market share of 47% in the SD and MicroSD  
 12 markets according to industry data. By December 2013, after SanDisk had implemented exclusive  
 13 dealing arrangements with Best Buy, CVS, Walgreens, and BJ's—in addition to the exclusive  
 14 relationships it already had with Costco and RadioShack—SanDisk's market share jumped sharply  
 15 to 66.1%. PNY is SanDisk's primary competitor for retail sales of SD and MicroSD. However,  
 16 once certain retailers—including CVS, Walgreens, and RadioShack—entered into exclusive dealing  
 17 arrangements with SanDisk, they refused to even entertain offers from PNY. As a result, during  
 18 this same time period, PNY's dollar market share dropped from 22.3% to 11.0%.

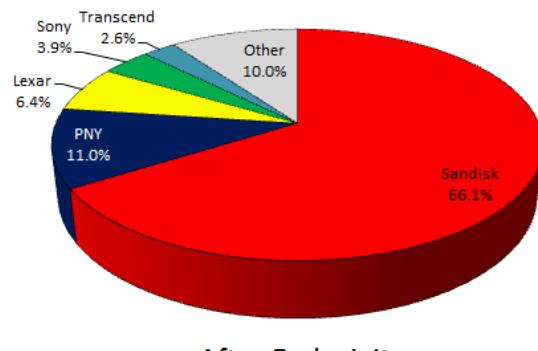
19 **TABLE 6: JULY 2011 VS. DECEMBER 2013 SDHC/MICROSDHC**

20 **DOLLAR MARKET SHARE**

21 **July 2011 SDHC & MicroSDHC Market Share**



21 **Dec 2013 SDHC & MicroSDHC Market Share**



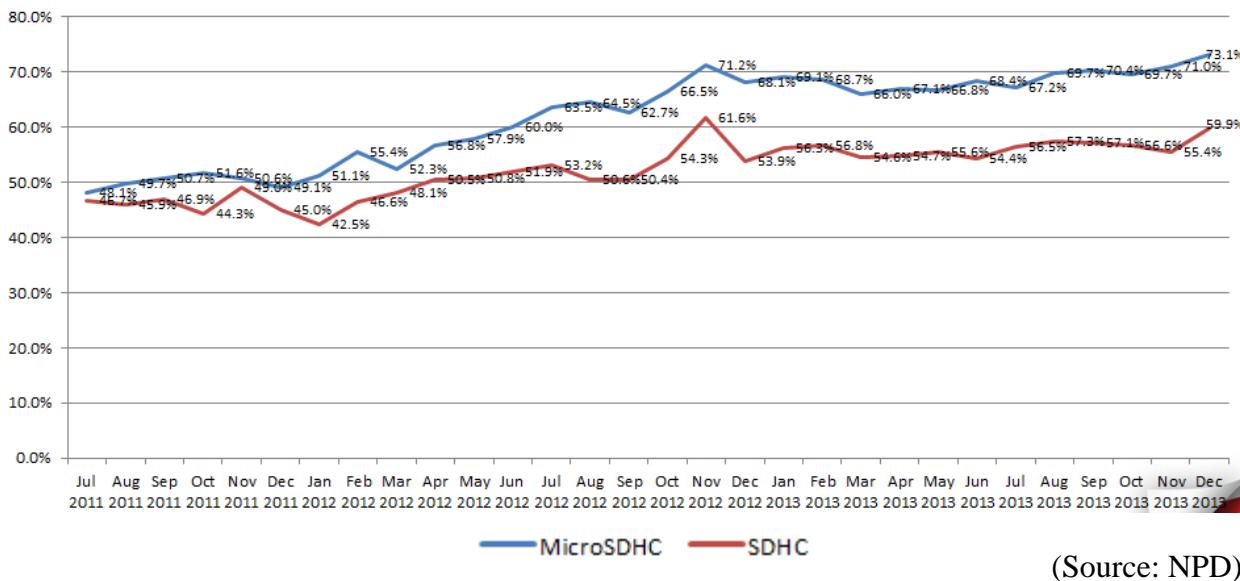
1  
2  
(Source: NPD)3  
4  
5  
6  
7  
173. The U.S. retail channel typically includes six different categories dominated by a limited number of retailers: (1) consumer electronics (Best Buy, RadioShack); (2) club stores (Costco, Sam's Club, BJ's); (3) wireless providers (Verizon, AT&T, Sprint); (4) drug store chains (CVS, Walgreens, Rite Aid); (5) office product stores (Staples, Office Max/Office Depot); and (6) mass retail (Walmart, Target, Kmart/Sears).8  
9  
174. SanDisk has systematically targeted category upon category through exclusive dealing to remove competition.10  
11  
12  
175. Indeed, as this chart shows, SanDisk has exclusive contracts with the entire consumer electronics, club, and wireless channels and has been moving to acquire exclusivity in the remaining three.13  
14  
**TABLE 7: SANDISK US RETAIL FLASH CARD DISTRIBUTION**

CE	CLUB	WIRELESS	DRUG	OPS	MASS
 X	 X	 X	 X	 X that was easy.	 ✓
 X	 X	 X	 X	 ✓	 ✓
	 X	 X	 ✓		 ✓

15  
16  
17  
18  
19  
20  
X = SANDISK EXCLUSIVE

✓ = SANDISK IN ASSORTMENT (ONE OF ONLY TWO)

21  
22  
(Source: NPD)23  
24  
25  
176. As a result, SanDisk has more than *doubled* its market share to over 70% in targeting retailers at one end with exclusive contracts while attempt to push aggregators and competitors out at the other end.

1 TABLE 8: SANDISK MONTHLY DOLLAR MARKET SHARE  
2

(Source: NPD)

127. Internal SanDisk documents show a concerted effort to attack and remove  
128 competition – whether it is Memorex, Kingston, Sony, Lexar, or as alleged here PNY.

129. SanDisk's exclusive arrangements with retailers are reflected in written agreements  
130 but may also be based on oral or informal understandings, not found in the written agreements,  
131 whereby retailers understand that if they wish to carry SanDisk SD cards they may not stock  
132 competing brands. Accordingly, the terms and conditions of SanDisk's exclusive arrangements  
133 may not be determined solely from SanDisk's written agreements.

134. SanDisk's exclusive arrangements, in practice and effect, are long-term. SanDisk  
135 has had exclusive arrangements in place with certain retailers for years. For instance, SanDisk's  
136 exclusive relationship with Costco dates to 2001 and has never been open to competition. On  
137 information and belief, none of SanDisk's exclusive arrangements—once established—have ever  
138 been terminated.

139. Some of SanDisk's written exclusive dealing agreements have provisions that make  
140 it very difficult or expensive for retailers to terminate the arrangement. For example, in co-op  
141 funding, a retailer generally accrues funds over time based on its purchases from a particular  
142 manufacturer. Then that fund becomes available for reimbursing the retailer when it runs  
143 advertisements featuring the manufacturer's product. Because funds continue to accrue through the

1 term of a retailer-manufacturer agreement, a retailer is likely to be leaving unused funding on the  
 2 table if it does not extend the arrangement for another term.

3 181. There are many practical impediments to a retailer terminating an exclusive  
 4 arrangement for SD cards. For instance, retailers operate on what are known as “planogram  
 5 cycles,” where the retailer lays out a part of the store for a six-month or longer period. Product  
 6 manufacturers like PNY generally find that it is not possible to place a product with a retailer unless  
 7 it is included in the planogram, and the opportunity to introduce new products to a planogram  
 8 comes up only at pre-planned intervals. To the extent the end of an exclusive dealing agreement  
 9 and the end of the planogram cycle do not align, it may not be possible for a competing seller of SD  
 10 cards to persuade a retailer to terminate the exclusive arrangement.

11 182. Through its exclusive dealing, SanDisk for many years has been the largest seller of  
 12 SD and MicroSD cards and has marketed its cards heavily. It is perceived by many retailers and  
 13 consumers as a market leader. For that reason, many retailers believe they must stock SanDisk’s  
 14 SD cards. Such retailers may be willing or even prefer to stock other brands as well, but when  
 15 SanDisk takes the position that it will sell its cards to a retailer *only* on an exclusive basis, the  
 16 retailer is likely to accept SanDisk’s demand and exclude all other brands of SD cards. This brand  
 17 preference for SanDisk means that even if other brands attempt to compete and offer better pricing  
 18 or terms, the retailer will not carry their products.

19 183. Indeed, multiple retailers, including RadioShack, CVS, and Walgreens, have  
 20 explicitly told PNY that as a result of their exclusive contract with SanDisk, the retailers simply  
 21 *cannot* consider PNY as a supplier.

22 184. In addition to the practical and economic difficulties inherent in terminating an  
 23 exclusive dealing arrangement with SanDisk, on information and belief, SanDisk has been known to  
 24 threaten retaliation in the event they terminate their arrangements.

25 185. PNY has made numerous attempts to compete with SanDisk at retailers at which  
 26 SanDisk has established an exclusive arrangement. These attempts have been unavailing. For  
 27 instance, PNY offered Costco pricing on SD cards that was below PNY’s cost on a special  
 28 promotion, in order to attempt to obtain a foothold at Costco and demonstrate to the Costco buyer

1 that it would benefit Costco to carry a competing SD card or to replace SanDisk as the exclusive  
 2 provider of SD cards. Costco declined this offer.

3 186. Moreover, PNY's attempts to present proposals for SD cards with retailers that are  
 4 exclusive with SanDisk have been rejected out of hand. Specifically, RadioShack, CVS, and  
 5 Walgreens have all told PNY that they could not even *entertain* a proposal from PNY because of  
 6 their exclusive arrangements with SanDisk.

7 **SanDisk's Exclusive Arrangements With Specific Retailers**

8 ***Best Buy***

9 187. Best Buy is a multi-national, multi-channel retailer of technology products, including  
 10 tablets and computers, televisions, mobile phones, large and small appliances, entertainment  
 11 products, digital imaging, and related accessories. Best Buy operates more than 1,000 stores in the  
 12 United States, with a presence in all fifty states as well as the District of Columbia and Puerto Rico.  
 13 Consumer electronics, computing, and mobile phones accounted for 78% of Best Buy's revenue in  
 14 its most recent fiscal year.

15 188. An internal SanDisk email chain from November 2012 regarding Best Buy shows  
 16 SanDisk's intent to push PNY out of the SD market. At the time, SanDisk was negotiating an  
 17 exclusive arrangement with Best Buy. Best Buy "reminded [SanDisk] that while [SanDisk] sell[s]  
 18 more, PNY provides more margins." In response, SanDisk prepared an excel spreadsheet showing  
 19 the benefit to Best Buy of going with SanDisk exclusively. The spreadsheet describes an  
 20 approximately [REDACTED] "exclusivity benefit" for Best Buy, but it is based entirely on  
 21 eliminating PNY's lower-priced products and replacing them with higher-priced SanDisk products.  
 22 In essence, by going with SanDisk exclusively, Best Buy is able to charge a higher price to the  
 23 consumer, and thereby earns a higher net revenue. However, the cost to the consumer is great: the  
 24 result of SanDisk's exclusive arrangement with Best Buy and other retailers is that the consumer  
 25 loses the option of purchasing PNY's lower-priced SD card.

26 189. SanDisk and Best Buy also discussed selling SanDisk products under a second brand  
 27 name—that way "one vendor manages the entire category, but the consumer would not really know  
 28 it." SanDisk masks exclusivity in this manner in several major retailers, giving consumers the

1 illusion of competition.

2 190. On June 11, 2013, SanDisk presented Best Buy with a “[REDACTED]  
 3 [REDACTED] with starting date July 28, 2013.” Assuming Best Buy  
 4 accepted the terms of this proposal, Best Buy is contractually obligated to sell SanDisk products  
 5 exclusively in its [REDACTED] through February 28, 2015.

6 191. To induce Best Buy to enter into an exclusive arrangement, SanDisk offered Best  
 7 Buy large payments to spend on marketing and merchandising. Notably, Best Buy is to receive  
 8 [REDACTED] in fiscal 2014 (pro-rated to the date that the exclusivity started) and [REDACTED] in  
 9 fiscal 2015 for a total of [REDACTED] in funding over the period of exclusivity.

10 192. Best Buy also receives a [REDACTED] merchandising allowance on gross sales, volume  
 11 incentive rebate (“VIR”) funding of [REDACTED] on net sales over [REDACTED] in fiscal 2014 and on net  
 12 sales over [REDACTED] in fiscal 2015, in addition to markdown funding of [REDACTED] to push out  
 13 competitors’ products.

14 193. The marketing funding, markdown funding, and merchandising allowance offered  
 15 under this agreement represents a drastic increase in the amount of funding from SanDisk.  
 16 According to an internal SanDisk email dated January 24, 2011, before Best Buy agreed to  
 17 exclusivity, SanDisk offered Best Buy “Total MDF support” of [REDACTED] for its fiscal 2012  
 18 program.

19 194. The large payments offered under the most recent program are contingent on Best  
 20 Buy carrying SanDisk products exclusively. According to the proposal, “In the event Best Buy  
 21 modifies product and promotional plans to include non-SanDisk branded products, then the  
 22 marketing funding and the markdown funding will be pro-rated to reflect the relative period of the  
 23 exclusive program until such non-SanDisk branded products were added.”

24 195. Moreover, the proposed agreement does not appear to include any early termination  
 25 provision, leaving Best Buy vulnerable not only to the loss of substantial marketing funds, but  
 26 potentially subject to a breach of contract suit if it were to end SanDisk’s exclusivity early.

27 196. In other words, SanDisk has agreed to pay Best Buy nearly [REDACTED] in  
 28 exchange for exclusivity.

197. Both the amount of the funding and the nature of the funding—with its ongoing accrual of allowances and its volume-based incentives—strongly disincentivize ending the exclusivity program even when the [REDACTED] has run its course.

198. On information and belief, SanDisk continues to be Best Buy's sole supplier of SD cards for its Digital Imaging department.

**TABLE 9: BEST BUY STORE MAY 2, 2014**



*RadioShack*

199. RadioShack carries a broad assortment of both name brand and private brand consumer electronics products. As of the end of 2013, RadioShack operated 4,297 stores throughout the United States, including locations in all 49 states as well as in Puerto Rico and the U.S. Virgin Islands.

200. SanDisk has had an exclusive arrangement with RadioShack for nearly a decade. SanDisk and RadioShack entered into an exclusive arrangement on August 11, 2006. That

1 agreement had a [REDACTED] term and was ultimately extended through June 30, 2010.

201. In exchange for selling SanDisk products exclusively, RadioShack received  
 3 [REDACTED] in marketing development funds (“MDF”). It also received a “co-op fund of [REDACTED]” on  
 4 all net sales. Additionally, SanDisk agreed to provide VIR funding of [REDACTED] at [REDACTED] in net  
 5 sales, [REDACTED] at [REDACTED] in net sales, and [REDACTED] at [REDACTED] in net sales. The accumulation of co-op  
 6 funds and substantial volume incentive rebates strongly disincentivize termination.

202. Under the terms of the 2006 exclusive arrangement between SanDisk and  
 RadioShack, “Neither party [could] choose to sever the agreement without the consent of the other.”  
 In fact, the terms specifically provide that even “SanDisk becoming uncompetitive” would not  
 allow RadioShack to terminate the exclusivity program, although it “could lead to [a] conversation”  
 about termination of the agreement.

203. A 2007 SanDisk power point notes that SanDisk is the “[e]xclusive provider to  
 RadioShack even though “Kingston [is] constantly trying to win [the] account.”

204. RadioShack and SanDisk agreed to extend SanDisk’s exclusivity on March 8, 2010,  
 and May 27, 2010, (extending program through December 31, 2010), November 23, 2010,  
 (extending program through December 31, 2011), November 23, 2011, (extending program through  
 December 31, 2012), and April 23, 2013 (extending program through December 31, 2013).

205. Under the 2013 calendar year program, RadioShack agreed to SanDisk exclusivity in  
 both SD cards and USB drives. In exchange, SanDisk agreed to pay RadioShack [REDACTED] in  
 MDF in addition to a [REDACTED] co-op accrual on net sales.

206. Under the 2013 agreement, if RadioShack terminated the agreement or ceased  
 exclusivity, it would not be able to make any further claims for MDF from SanDisk. In other  
 words, SanDisk’s [REDACTED] payment to RadioShack for MDF is contingent upon RadioShack  
 carrying SanDisk exclusively.

207. When PNY approached RadioShack with a proposal for PNY’s SD cards,  
 RadioShack responded that it could not even entertain an offer from PNY as a result of its exclusive  
 arrangement with SanDisk.

208. On information and belief, for the duration of each exclusive dealing agreement

1 between SanDisk and RadioShack, RadioShack never terminated any of the agreements.

2 ***Costco***

3 209. Costco operates membership warehouses throughout the United States. As of  
4 September 1, 2013, Costco had 451 stores in the United States and Puerto Rico.

5 210. A 2007 SanDisk power point notes that SanDisk is Costco's "[e]xclusive provider."

6 211. A 2010 SanDisk email discussing Kingston's efforts to win Costco's business states,  
7 "This boils down to trying to keep a competitor off the shelf . . . ."

8 212. Likewise, SanDisk emails in 2011 and 2012 reveal its efforts to maintain its  
9 exclusive dealing arrangement with Costco, including the involvement of Mr. Mehrotra to aid in  
10 SanDisk's strategy of "[r]ather than competing solely on price [at Costco], we need to understand  
11 what will keep Kingston out." In the same email thread, SanDisk personnel discussed plans of  
12 reneging on "the 'gentlemen's agreement' that existed between Costco and SanDisk not to sell  
13 Sam's [Club] if Costco maintained an exclusive posture with SanDisk."

14 213. An internal SanDisk email dated September 10, 2012 confirms SanDisk's exclusivity  
15 at Costco: "We are exclusive at Costco for USB, Imaging and Mobile cards, so the 100% figure  
16 below is correct."

17 214. Although SanDisk competitors have attempted to sell to Costco, SanDisk has  
18 responded by temporarily lowering its cost to induce Costco not to go forward with testing of  
19 competitors' products. Aside from a single Kingston test, which never proceeded past the testing  
20 stage, SanDisk successfully prevented competitors from testing their products at Costco through  
21 2013. During that time, SanDisk remained Costco's exclusive provider of SD cards and USB  
22 drives. Costco is currently testing Lexar product.

23 215. Outside of the Kingston and Lexar tests, SanDisk has been Costco's exclusive  
24 provider of SD cards and USB drives since 2006, and, on information and belief, SanDisk has been  
25 Costco's exclusive flash media vendor for over a decade.

26 ***Sam's Club***

27 216. Sam's Club, which is owned by Walmart, is a membership club warehouse with 632  
28 clubs throughout the United States and Puerto Rico. In fiscal 2014, Sam's Club had net sales of

1 \$57.2 billion and an operating income of \$2.0 billion.

2 217. On information and belief, SanDisk became the sole supplier of SD cards to Sam's  
 3 Club in 2011. On information and belief, SanDisk and Sam's Club have agreed to continue their  
 4 exclusive arrangement through 2014.

5 218. SanDisk has not produced any written agreement with Sam's Club.

6 ***BJ's***

7 219. BJ's is a leading operator of membership warehouse clubs in the Eastern United  
 8 States, operating 201 stores in 15 states.

9 220. Under SanDisk's program with BJ's, BJ's has agreed to carry SanDisk USB drives  
 10 and SD cards exclusively for a two-year period, March 31, 2013 to March 31, 2015.

11 221. In exchange for exclusivity, SanDisk agreed to pay BJ's [REDACTED] in "markdown  
 12 funds."

13 222. BJ's cannot terminate the contract or carry any competing products unless it pays  
 14 [REDACTED] to SanDisk.

15 223. On information and belief, neither party has terminated the exclusive arrangement.

16 ***CVS***

17 224. CVS is the largest integrated pharmacy health care provider in the United States.  
 18 CVS operates more than 7,600 retail stores in the United States.

19 225. CVS has agreed to purchase USB drives, SD cards, and MicroSD cards exclusively  
 20 from SanDisk. CVS is obligated to purchase exclusively from SanDisk for a three-year period,  
 21 from November 2, 2011 to November 2, 2014.

22 226. There is no question that both CVS and SanDisk view this agreement as an exclusive  
 23 dealing arrangement. In a May 13, 2011 email to CVS, SanDisk stated that it was "pleased to  
 24 present CVS a revised proposal *for an exclusive 3-year program* that solves the business  
 25 requirements for selecting a sole supplier for SanDisk-branded and private label Flash Cards and  
 26 USB Drives" (emphasis added). In an internal email, SanDisk characterizes the program as  
 27 follows:

28 - Sandisk will be the sole provider of flash cards and USB drives to [REDACTED]

1 - Term of exclusive agreement: [REDACTED]

2 227. In exchange for exclusivity, SanDisk agreed to pay CVS [REDACTED] in  
3 "liquidation compensation."

4 228. If CVS were to terminate the exclusivity period for any reason other than deficient  
5 supply on SanDisk's part, it would be required to pay back a pro-rated amount of the liquidation  
6 compensation. In other words, the [REDACTED] that SanDisk paid to CVS is contingent on  
7 SanDisk's exclusivity for a three-year period.

8 229. A September 2012 internal SanDisk email states that SanDisk is "100% for Imaging  
9 and Mobile" (i.e. SD and MicroSD cards) at CVS. The email further notes that SanDisk "would be  
10 100% [for USB drives] without a 3rd party Novelty USB offering."

11 230. When PNY approached CVS with a proposal for PNY's SD cards, CVS responded  
12 that it could not even entertain an offer from PNY as a result of its exclusive arrangement with  
13 SanDisk.

14 231. On information and belief, neither party has terminated the agreement and SanDisk  
15 continues to be CVS's sole supplier of SD cards and USB drives.

#### 16 *Walgreens*

17 232. Walgreens operates the largest drugstore chain in the United States with net sales of  
18 \$72.2 billion in the fiscal year ended August 31, 2013. As of its 2013 fiscal year end, Walgreens  
19 operated 8,582 locations in 50 states, the District of Columbia, Guam, and Puerto Rico.

20 233. As early as 2009, an internal SanDisk email reflects that SanDisk believed it had  
21 secured a 100% "volume share assumption" at Walgreens with respect to SD and MicroSD. In  
22 other words, SanDisk projected that it would be the sole vendor of SD Cards and MicroSD cards at  
23 Walgreens.

24 234. SanDisk negotiated with Walgreens for an exclusive relationship beginning in at  
25 least April 2011. In an internal email dated April 29, 2011, SanDisk noted that "best case scenario  
26 we will be exclusive for the whole line and PNY will be out."

27 235. SanDisk entered into an exclusive arrangement for SD cards with Walgreens in  
28 January 2012. The agreement had a one year term, ending December 31, 2012. A September 2012

1 internal SanDisk email states that SanDisk's share of "Imaging and Mobile" (i.e., SD and MicroSD  
 2 cards) at Walgreens was 100%.

3 236. In exchange for exclusivity, SanDisk agreed (among other things) to pay Walgreens  
 4 [REDACTED]. This payment was expressly conditioned on SanDisk remaining Walgreens' exclusive  
 5 supplier for SD cards.

6 237. According to an internal SanDisk email, "winning this deal was very important."

7 238. The exclusive dealing arrangement between SanDisk and Walgreens continued  
 8 through 2013. According to an email between SanDisk and Walgreens, SanDisk remained "[t]he  
 9 exclusive supplier for branded memory cards, private label memory cards and private label USB  
 10 drives."

11 239. In exchange for exclusivity in [REDACTED] SanDisk agreed to pay Walgreens [REDACTED]  
 12 to fund "metal fixtures."

13 240. When PNY approached Walgreens with a proposal for PNY's SD cards, Walgreens  
 14 responded that it could not even entertain an offer from PNY as a result of its exclusive arrangement  
 15 with SanDisk.

16 241. On information and belief, SanDisk continues to be Walgreens' sole supplier of SD  
 17 cards.

18 ***Staples***

19 242. Staples is an office products superstore that serves the needs of business customers  
 20 and consumers. Staples operated over 1,500 stores in the United States at the end of its fiscal year  
 21 2013.

22 243. In internal emails, SanDisk has expressed its goal of stifling competition through its  
 23 exclusive arrangements. For example, in a March 2010 email, SanDisk personnel and an outside  
 24 marketing firm discussed how at Staples stores its "category exclusive programs can help block out  
 25 [Lexar's] voice," and in other emails discussed tactics to block PNY from Staples shelves and the  
 26 consequences in terms of pricing if the retailer backed out. SanDisk even acknowledged that  
 27 PNY's presence in the retailer's assortment would keep SanDisk "honest" in its SD card pricing,  
 28 while simultaneously working to get PNY off the shelves. On information and belief, SanDisk's

1 efforts at Staples have resulted in all competition in the relevant markets being foreclosed at Staples  
 2 stores in return for a substantial [REDACTED] payment from SanDisk to the retailer.

3 244. In 2011, according to an internal SanDisk email, SanDisk considered offering  
 4 Staples \$1,000,000.00 in exchange for Staples pulling PNY out of ads going forward. According to  
 5 the same email, Staples recognized that SanDisk was “essentially asking [Staples] to kick PNY  
 6 out.” The email suggested that SanDisk was considering a payment of \$5,000,000.00 to Staples in  
 7 exchange for kicking out PNY. The same email reflects Staples’ belief that “losing the Staples  
 8 business would put PNY out of business . . .”

9 245. In January 2012, Staples told SanDisk that “[t]he appeal of exclusivity is the [REDACTED] in  
 10 margin \$ upside.” Staples sought a “margin \$ ‘guarantee’” from SanDisk.

11 246. SanDisk was able to convince Staples to enter into an exclusive dealing arrangement  
 12 for SD cards in 2014. The term of the agreement is January 1, 2014 to December 31, 2014.

13 247. In exchange for exclusivity, SanDisk agreed to pay Staples a [REDACTED]  
 14 “planogram fee.” SanDisk also provided [REDACTED] for a “Funded Staples associate” and  
 15 [REDACTED] “for mutually agreed upon marketing activities.”

16 248. Although an exclusivity term, or termination provisions, are not described in the  
 17 documentation, with quarterly funding accruing and a funded associate, Staples is economically  
 18 motivated to maintain the exclusive arrangement.

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**TABLE 10: STAPLES STORE MAY 2, 2014****Walmart**

249. Walmart operates retail and other stores in various formats around the world. In fiscal 2014, Walmart U.S. attracted nearly 140 million weekly shoppers and delivered net sales of more than \$279 billion. Walmart operates more than 4,000 superstores, discount stores, and other small format stores throughout the United States.

250. An internal SanDisk email from September 2011 notes that Walmart “is pleased with the state of the SanDisk Mobile business overall for 2011 and [SanDisk’s] **category exclusivity** will continue” (emphasis added).

251. SanDisk recently enticed Walmart to adopt an exclusive program in 500 stores where SanDisk will be the only and exclusive provider of SD cards for those stores. In the event SanDisk is successful in extending this exclusive arrangement with Walmart, SanDisk will control outlets constituting over 75% of the retail distribution channels for SD cards.

252. The result of SanDisk's accumulation of exclusive dealing arrangements in the market for SD cards is that SanDisk's competitors are denied meaningful market access and deprived of the opportunity to achieve economies of scale, while consumers face higher prices for SD cards than they would if multiple brands were competing for sales at the same retail outlets. There are no procompetitive benefits to the exclusive dealing arrangements SanDisk has entered into.

## **Harm to Competition and Consumers**

253. SanDisk's conduct harms not only PNY but harms the competitive process in at least two major respects. First, SanDisk's conduct threatens to eliminate, and has already substantially eliminated, aggregators as a factor in the market, and threatens to eliminate all competition from the SD flash memory system product market in particular. Second, SanDisk's conduct threatens competition in the flash memory chip market by foreclosing SanDisk's one significant, unlicensed competitor—Micron—from access to customers. This injury to the competitive process will tend to result, and has already resulted in, higher prices to consumers.

## *Elimination of Aggregators*

254. Aggregators play a significant role in the USB flash memory systems and products markets. Because aggregators are able to purchase excess supplies of flash memory chips at reduced prices they are often more efficient than vertically integrated firms. As alleged above, Aggregators function as mavericks in the marketplace, pursuing aggressive and independent pricing strategies. Moreover, aggregators are significant customers for companies that manufacture flash memory chips. PNY and other aggregators have recognized brand names and robust distribution systems, built up over many years. The elimination of aggregators makes entry more difficult in the markets for flash memory chips, systems and products because a firm may need to enter all of these markets simultaneously. In addition, the elimination of aggregators tends to raise prices to ultimate consumers because it removes a more efficient class of competitors.

255. SanDisk regards aggregators as a threat and wishes to eliminate them or to convert them to mere purchasers of finished product from SanDisk and/or its licensees—*i.e.*, to remove them from the USB flash memory systems market and confine them to the USB flash memory

1 systems product market in which they would participate only as relabelers of products manufactured  
 2 by other entities who pay SanDisk a royalty.

3 256. In the Wisconsin Action and the ITC Investigation, SanDisk targeted approximately  
 4 twenty-five companies that participated in the flash memory systems or products markets, including  
 5 all significant aggregators.

6 257. Between January 2008, and April 2008, in addition to PNY, Trek 2000 International,  
 7 Ltd., Verbatim Corp., Verbatim Americas, Add-On Computer Peripherals, Inc. and Add-On  
 8 Computer Peripherals, LLC (collectively, Add-On USA), Edge Tech Corporation, Infotech  
 9 Logistic, Interactive Media Corp. (Kanguru), Kaser Corporation, TSR Silicon Resources Inc. and  
 10 Welldone Company also signed coercive license agreements with SanDisk that are similar in all  
 11 material respects to the PNY License and that render it essentially uneconomic to act as an  
 12 aggregator.

13 258. Other firms simply exited the market rather than fight SanDisk, including A-DATA  
 14 Technology Co., Ltd., A-DATA Technology (USA) Co., Ltd. Melco Holdings Inc., Buffalo Inc.,  
 15 Buffalo Technology (USA), Inc. and Corsair Memory, Inc.

16 259. In addition, while Kingston successfully fought off SanDisk's patent infringement  
 17 lawsuit, during the pendency of the lawsuit and continuing as of today, Kingston has switched from  
 18 acting as an aggregator to acting as a relabeler in order to reduce the potential damages it might be  
 19 exposed to and/or to prevent SanDisk from filing another infringement suit to enforce additional  
 20 system-level patents it claims to have.

21 260. Such attacks on aggregators have fundamentally reshaped the market (or threaten to  
 22 do so), to the detriment of consumers.

23 261. SanDisk's specific consolidation of market power in the SD flash memory system  
 24 product market—achieved, *inter alia*, through its aggressive exclusive dealing program, has  
 25 decreased competition in the SD card market and threatens to further reduce competition to the  
 26 detriment of consumers who pay higher prices for SD cards.

27 ***Foreclosure of Competition In The Flash Memory Chip Market***

28 262. In addition to the direct effect on aggregators, SanDisk's conduct harms competition

1 in the flash memory chip market. As the court in the Kingston case found after trial, the flash  
 2 memory chip market is highly concentrated, with six chip manufacturers—SanDisk, Intel, Toshiba,  
 3 Samsung, Micron, and Hynix—earning 99% of worldwide revenue from the sale of flash memory  
 4 chips in 2010. Only one flash memory chip manufacturer, Micron, has not accepted a license with  
 5 SanDisk. Micron accounts for approximately 10% of flash memory chip manufacturing; SanDisk  
 6 and its licensees for 89%.

7 263. Notwithstanding its patent portfolio, SanDisk has failed to enjoin Micron's  
 8 manufacture of flash memory chips or to force it to take a license.

9 264. Unable to force Micron out of the market directly, SanDisk has instead adopted a  
 10 strategy to indirectly force Micron out of the market by increasing its costs and choking-off  
 11 Micron's access to major chip customers.

12 265. The effect of the uniform license imposed by SanDisk on all or nearly all aggregators  
 13 in the market is that the aggregators must pay an 8% penalty if they buy MLC flash memory chips  
 14 not licensed by SanDisk—which in effect means not buying from Micron.

15 266. The 8% penalty imposed on aggregators for purchases of unlicensed flash memory  
 16 chips is much more than the royalty amounts that SanDisk collects from the flash memory chip  
 17 manufacturers with whom it has a license. In other words, even if a licensed flash memory chip  
 18 manufacturer passes on its entire SanDisk royalty fee to its customers, it will still have a significant  
 19 price advantage over an unlicensed chip manufacturer, who will tend to have to discount to allow its  
 20 customers to absorb the penalty imposed under the SanDisk system license. The tax acts as a  
 21 penalty that tends to make it impossible for Micron to successfully compete for business.

22 267. On information and belief, SanDisk has from time to time told aggregators that if  
 23 they purchase flash memory chips from SanDisk, they not only will avoid the [REDACTED] penalty for  
 24 purchasing such chips from Micron, but SanDisk will also waive the [REDACTED] royalty assessed for  
 25 interconnecting the flash memory chips with a controller. In this instance, the effective tax imposed  
 26 on purchases from Micron is approximately [REDACTED]

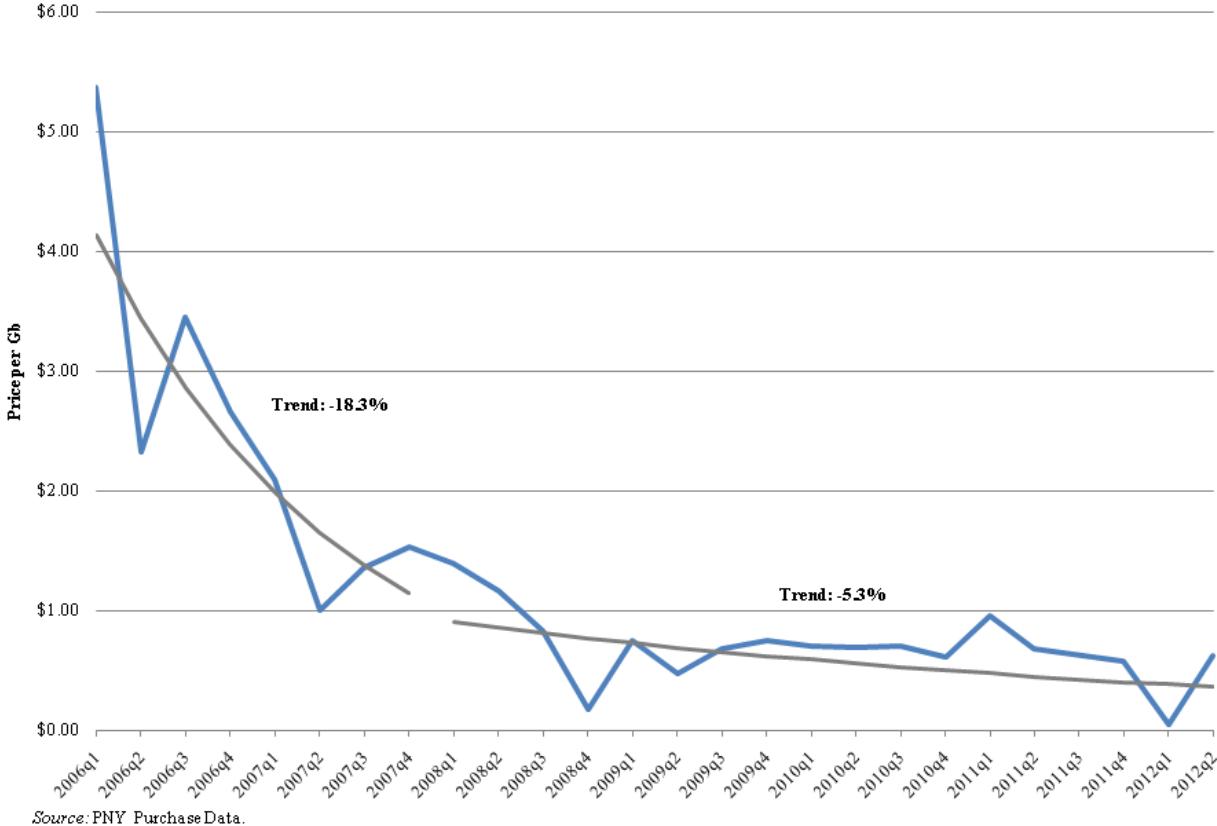
27 268. Aggregators making USB flash memory systems and products are significant  
 28 consumers in the market for flash memory chips, and a reduction in chip sales to such aggregators

1 causes material harm to Micron. If Micron were driven from the market, it would have a major,  
 2 adverse effect on consumers.

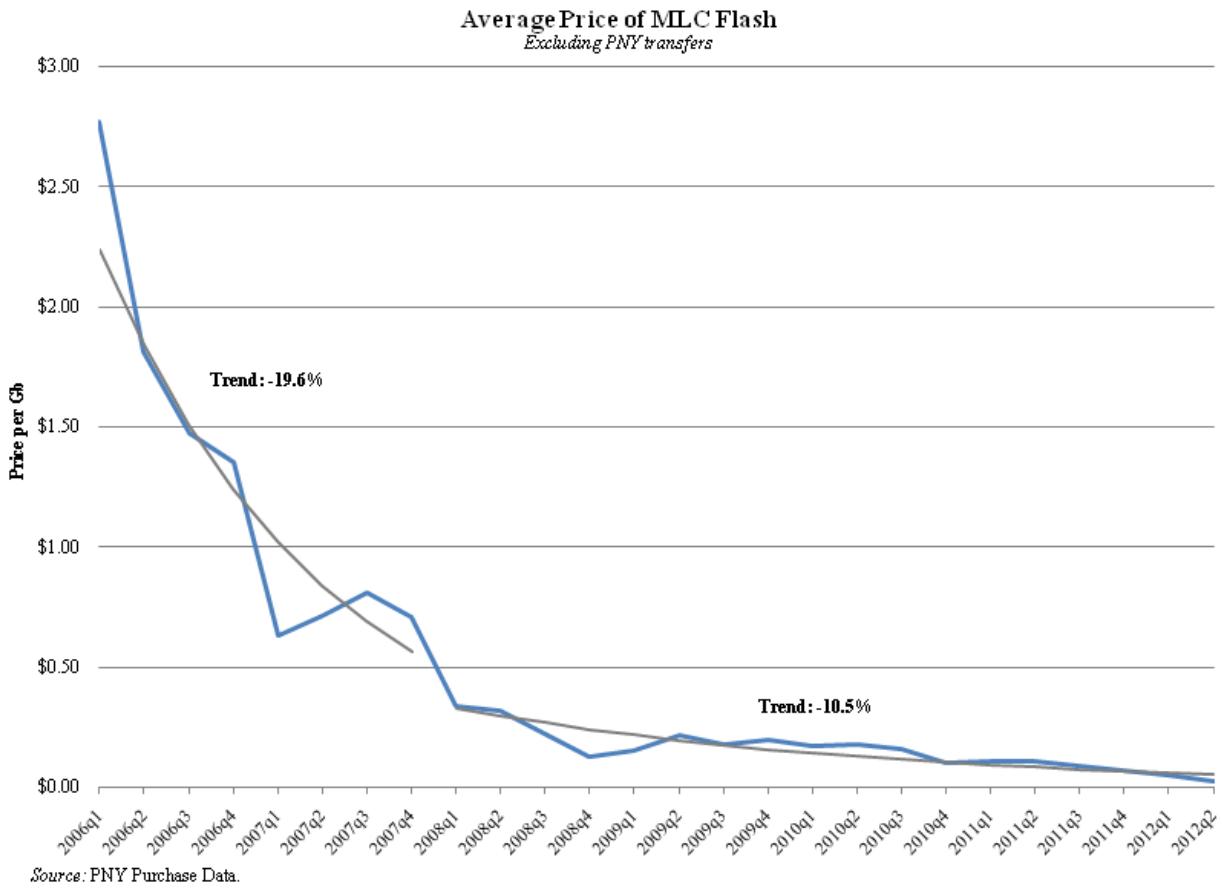
3       269. The effects of SanDisk's anticompetitive foreclosure have already been seen in the  
 4 marketplace for flash memory chips. As with all semiconductor based products, flash memory  
 5 chips have been characterized by steadily declining prices. This well-known tendency is a result of  
 6 the observation credited to Intel founder Gordon Moore that the number of transistors  
 7 manufacturers could place on a semiconductor would double approximately every two years and the  
 8 performance of semiconductors would double approximately every 18 months.

9       270. However, flash memory chips prices have not declined as quickly as Moore's law  
 10 would predict. For instance, prior to SanDisk initiating the exclusionary activity described in this  
 11 complaint, the average price PNY paid for flash memory chips (MLC, SLC and TLC types)  
 12 declined over the period from the first quarter of 2006 through the fourth quarter of 2007 at a  
 13 compound rate of 17% per quarter. But from the first quarter of 2008 through the first quarter of  
 14 2012 (*i.e.*, during the License period), the price paid by PNY declined at a compound rate of only  
 15 12% per quarter. Indeed, over the 16 quarters in this period, the average price paid by PNY  
 16 increased in six quarters (relative to the previous quarter).

17       271. This same effect—a dramatic change in the rate of price decline—is seen in both  
 18 MLC and SLC flash memory chips, the two types of flash memory chips in which SanDisk has  
 19 sought to foreclose competition from Micron. As seen in the chart below, the logarithmic  
 20 regression lines for the prices paid by PNY for SLC flash memory chips before and after the  
 21 initiation of SanDisk's exclusionary conduct are dramatically different. The pre-2008 regression  
 22 line shows prices declining at a rate of 18.3% per quarter. The post-2008 regression line shows  
 23 prices declining at a rate of only 5.3% per quarter.

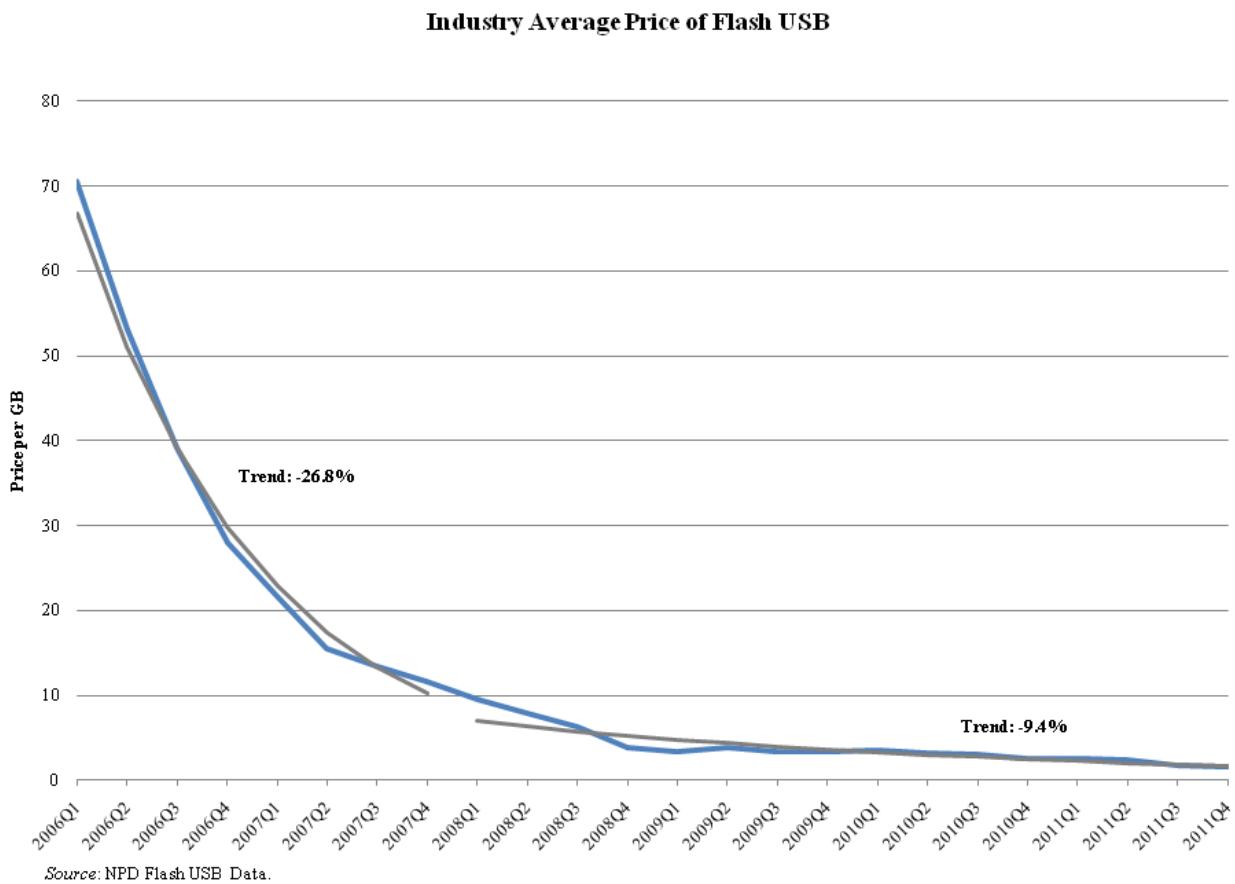
1 TABLE 11: PRICE PAID FOR SLC CHIPS  
23  
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Average Price of SLC Flash  
*Excluding PNY transfers*

272. The logarithmic regression lines for the prices paid by PNY for MLC flash memory chips before and after the initiation of SanDisk's exclusionary conduct are also dramatically different. The pre-2008 regression line shows prices declining at a rate of 19.6% per quarter. The post-2008 regression line shows prices declining at a rate of only 10.5% per quarter.

1 TABLE 12: PRICE PAID FOR MLC CHIPS  
2

***Higher Prices Paid By Consumers As A Result Of SanDisk's Conduct***

273. Similarly, the prices for USB flash memory system products have not declined as fast as predicted by Moore's law since the initiation of the exclusionary activity described in this complaint, nor declined as fast after the initiation of such acts as they did in prior periods. For example, the chart below shows an industry average retail price for USB flash memory system products declining at a rate of 26.8% in the period from the first quarter of 2006 through the fourth quarter of 2007. But from the first quarter of 2008 through the first quarter of 2012, the industry average retail price declined at a rate of only 9.4%.

1 TABLE 13: RETAIL PRICE FOR USB FLASH MEMORY SYSTEM PRODUCTS  
2

274. The primary reason for the change in pricing before and after the first quarter of 2008 is SanDisk's anticompetitive conduct, as described above.

275. On information and belief, SanDisk itself has made the observation that forcing aggregators to abide by its licensing and royalties scheme drives up prices of USB flash memory system products. Specifically, on information and belief, SanDisk has asserted that it suffered millions of dollars in losses due to its inability to raise prices because a particular aggregator, Kingston, had resisted adopting the standard license.

276. On information and belief, SanDisk's consolidation of power in the SD flash memory system product market has likewise caused prices for such products to decrease at a slower pace than they should be decreasing.

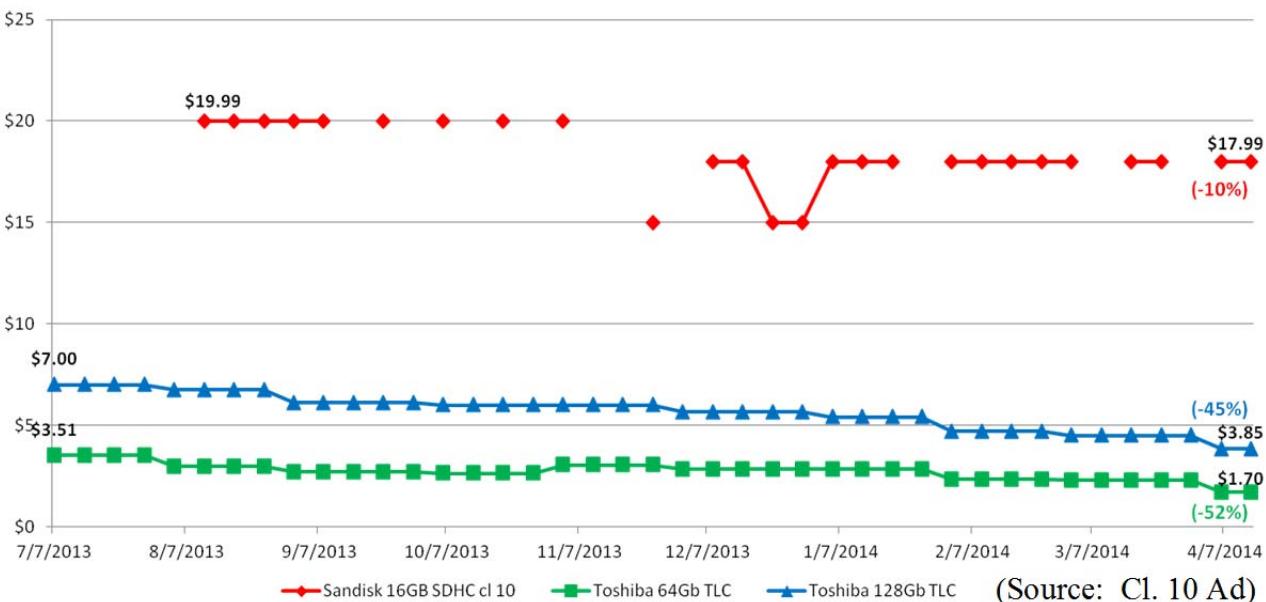
277. SanDisk's exclusive dealing arrangements in the SD flash memory system product market have had a significant anti-competitive effect on pricing for SD cards.

1       278. At [REDACTED], where SanDisk obtained an exclusive arrangement in [REDACTED], the  
 2 prices of SD cards have remained artificially high. The key component in SD cards is flash  
 3 memory, and the price of SD cards typically moves with the price of flash memory. However, this  
 4 pattern has been broken at [REDACTED] since [REDACTED]. During that time, the price of flash memory  
 5 has decreased by 45-52%. However, SanDisk has managed to keep its price on SD cards at [REDACTED]  
 6 [REDACTED] nearly level and has not reduced them at all in 2014. (The prices shown below are for 16 and  
 7 32 gigabyte SD cards and 64 and 128 gigabit flash memory chips. One gigabyte is the same as 8  
 8 gigabits. An SD card can contain more than one flash memory chip: a 32 gigabyte SD card requires  
 9 256 gigabits—consisting of four 64 gigabit chips or two 128 gigabit chips.)

10     279. Thus, while the component costs of creating an SD card have dropped by 45–52%,  
 11 SanDisk has artificially maintained retail prices by foreclosing competition through exclusive  
 12 dealing.

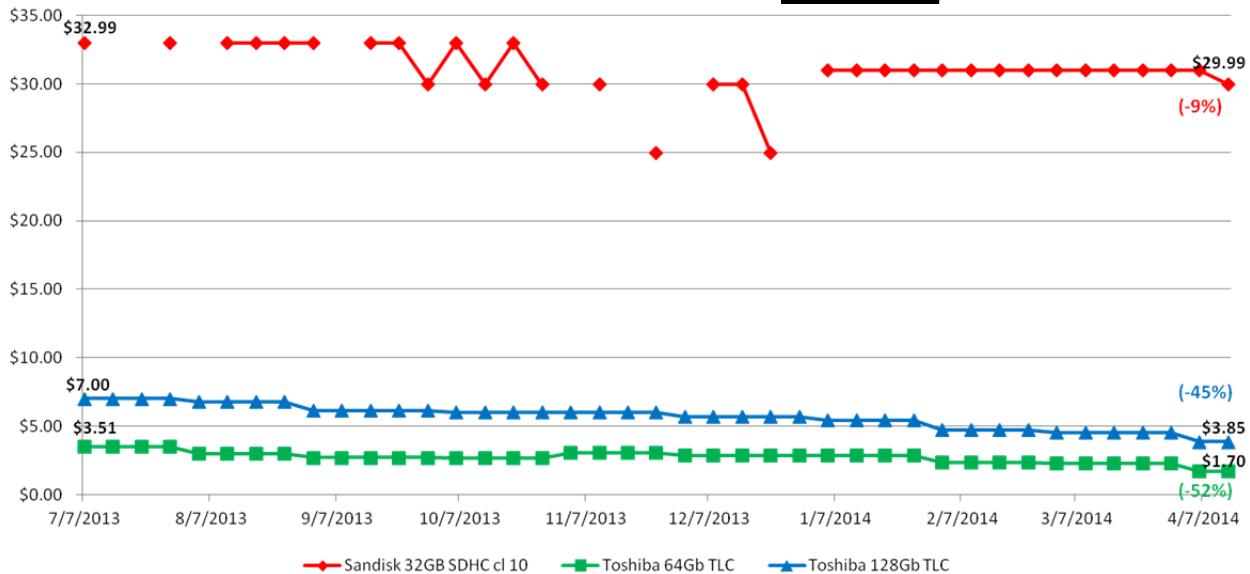
13     280. The result is massive; hundreds of millions of dollars in damages not only to PNY,  
 14 but also to U.S. consumers.

15     **TABLE 14: SANDISK 16GB SDHC PRICING AT [REDACTED] VS. MARKET**



25     (Source: Cl. 10 Ad)

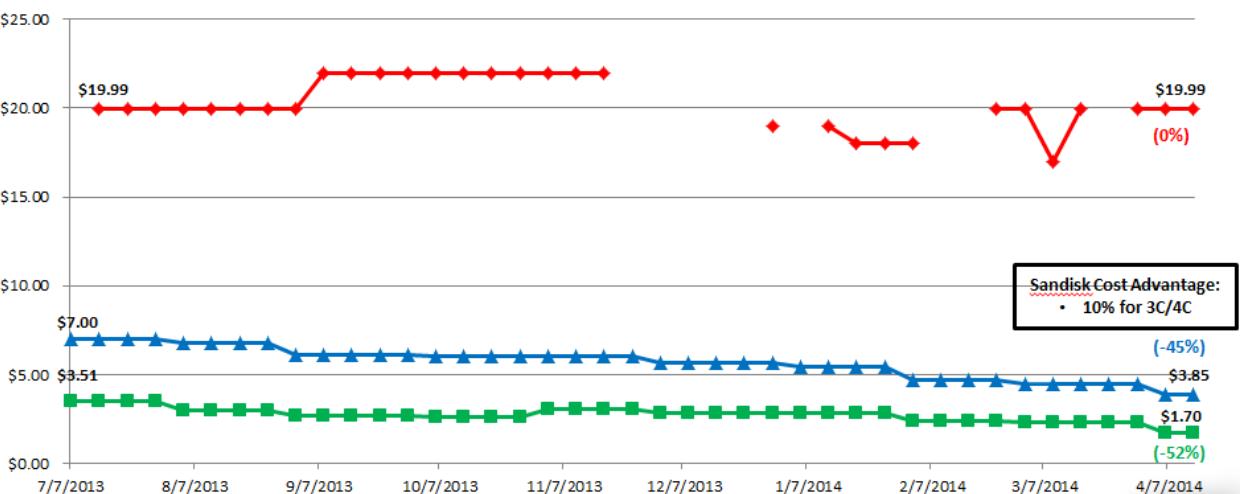
1 TABLE 15: SANDISK 32GB SDHC PRICING AT [REDACTED] VS. MARKET



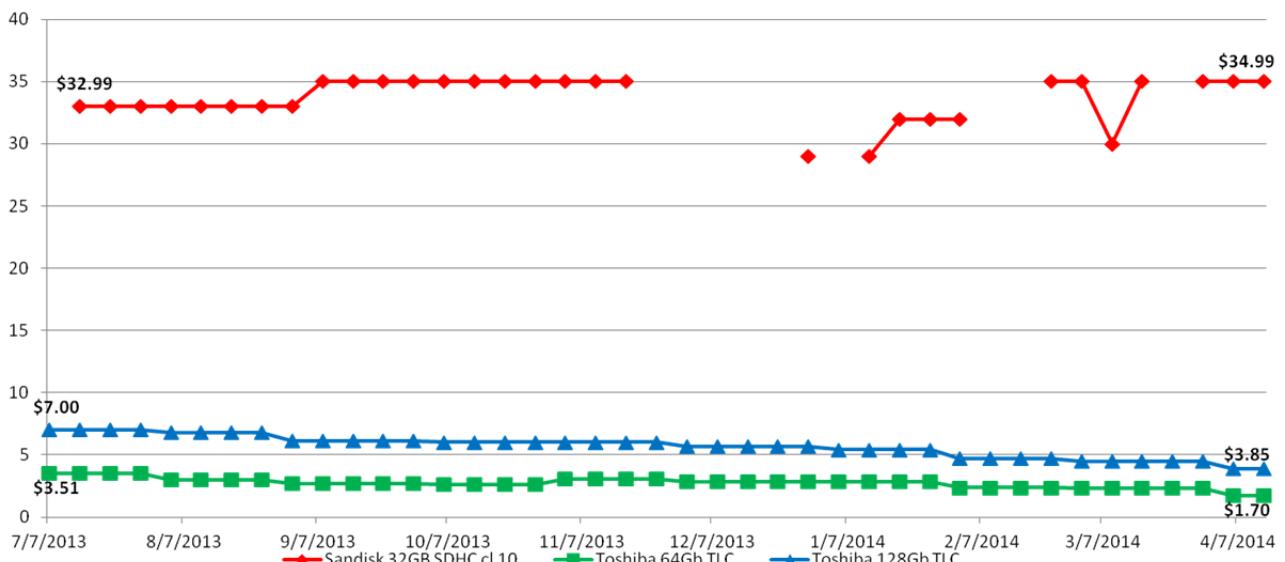
11 (Source: Class 10 Advertised Pricing)

13 281. A similar trend is apparent in [REDACTED] stores, where SanDisk dropped its price for a  
 14 short time when it had PNY competition, then raised prices upon reaching an exclusive deal,  
 15 notwithstanding incredible drops in cost.

17 TABLE 16: SANDISK 16GB SDHC AD PRICING AT [REDACTED] VS. MARKET



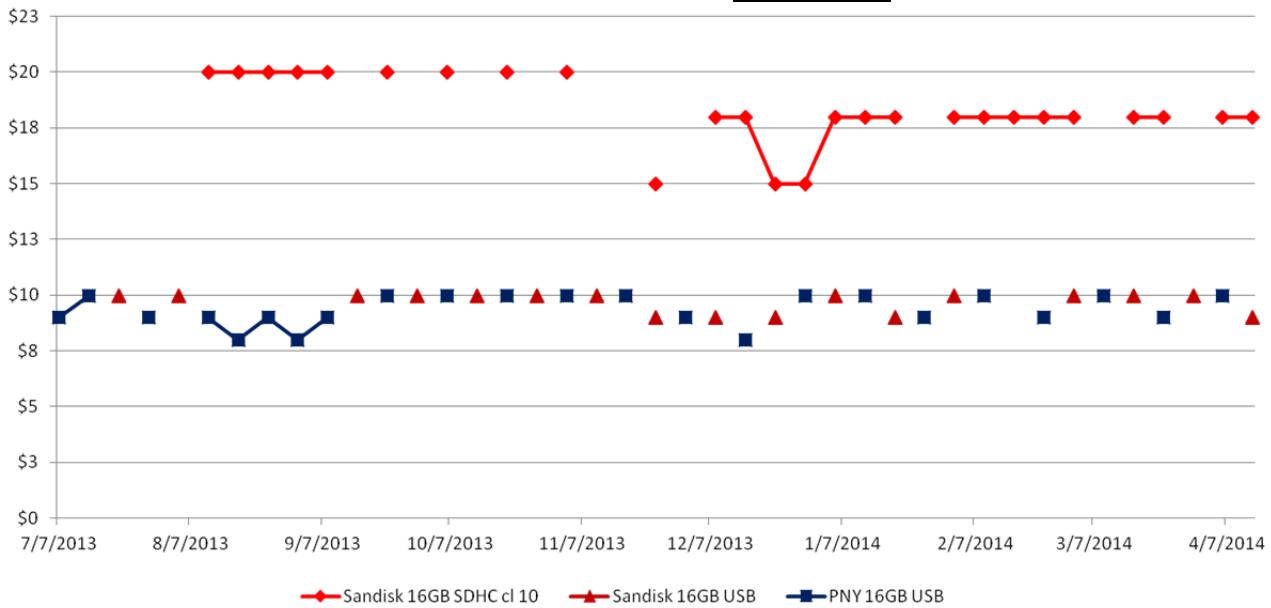
26 (Source:NPD)

1 TABLE 17: SANDISK 32GB SDHC PRICING AT █ VS. MARKET  
2

11 (Source: Class 10 Advertised Pricing)

12 282. The effect of exclusive dealing arrangements with SD cards is also shown by the  
 13 contrast between the pricing of SD cards, where SanDisk now threatens to controls more than 75%  
 14 of the market with exclusive dealing arrangements, and USB flash drives, where SanDisk has a  
 15 significantly smaller portion of the market locked up with exclusive dealing arrangements. The  
 16 components of a USB flash drive and SD card are very similar, such that the cost of USB flash  
 17 drives and SD cards of the same capacity are quite close (if anything, USB flash drives cost slightly  
 18 more, because they require an additional outer housing). Since July 2013, however, █ has  
 19 charged more than 50% more for 16 GB SD cards—where SanDisk has en exclusive—than it has  
 20 for 16 GB USB flash drives—where PNY continues to compete on the shelf with SanDisk.

1 TABLE 18: SANDISK 16GB SDHC PRICING AT █ VS. 16GB USB PRICING



12 (Source: Weekly Ad Pricing)

13 **Antitrust Injury**

14 283. As a result of SanDisk's conduct, PNY has suffered antitrust injury, *i.e.*, injury of  
 15 the type the antitrust laws are intended to prevent and that flows from that which makes SanDisk's  
 16 acts unlawful.

17 284. In particular, PNY has paid higher prices for flash memory chips, has been required  
 18 to make payments under the License, has been forced to reduce its margin on USB flash memory  
 19 system products, has been pushed out of a high proportion of retail outlets for SD cards, and has lost  
 20 sales of both SD and USB flash memory system products, all as a result of SanDisk's conduct. In  
 21 each instance, PNY's injury stems not from any sort of heightened or increased competition, but  
 22 rather from the lessening of competition caused by SanDisk.

23 285. As a result of SanDisk's exclusionary conduct, and repeated misstatements and  
 24 mischaracterizations to PNY, and more importantly, to this Court, PNY has been damaged, as have  
 25 consumers and competition as a whole.

26 **The SanDisk Royalties Lawsuit**

27 286. On July 26, 2011, SanDisk filed a lawsuit in the Superior Court of the State of  
 28 California for the County of Santa Clara, entitled *SanDisk Corporation v. PNY Technologies, Inc.*

1 *f/k/a P.N.Y. Electronics, Inc.*, Case No. 1-11-CV-205928 (the “SanDisk Lawsuit”), alleging that  
 2 PNY breached the License by not paying royalties.

3 287. SanDisk filed the SanDisk Lawsuit without first following the alternative dispute  
 4 resolution provision set forth in the License.

5 288. Following the License’s alternative dispute resolution provision was a condition  
 6 precedent to SanDisk’s filing of its Lawsuit.

7 289. The court in which SanDisk filed the SanDisk Lawsuit does not have subject matter  
 8 jurisdiction over the case under 28 U.S.C. § 1338(a), which was amended with the enactment of the  
 9 Leahy-Smith America Invents Act on September 16, 2011, to state, “No State court shall have  
 10 jurisdiction over any claim for relief arising under any Act of Congress relating to patents . . . .”  
 11 PNY brings this more complete action to address all of the disputes between the parties relating to  
 12 the License.

13 290. SanDisk’s actions in filing the SanDisk Lawsuit in violation of the terms of its own  
 14 License further illustrates how unfairly SanDisk treats its competitors in this field.

15 **COUNT I**

16 **(Sherman Act § 1: Tying)**

17 291. PNY repeats and incorporates by reference the allegations set forth in Paragraphs 1  
 18 through 270 as if fully set forth herein.

19 292. SanDisk’s unlawful acts create an unreasonable restraint of trade and commerce and  
 20 threaten to extend SanDisk’s monopoly in the flash memory technology market into the separate  
 21 market for flash memory chips, without legitimate business or technological justification, in a  
 22 manner which has caused harm to competition, and in violation of Section 1 of the Sherman Act  
 23 and Section 3 of the Clayton Act.

24 293. SanDisk has substantial power in the market for flash memory technology—both the  
 25 technology directed toward flash memory chips and the technology directed toward USB flash  
 26 memory systems. SanDisk claims that its patents are practiced in all flash memory chips and all  
 27 USB flash memory systems, and, on information and belief, it controls or licenses close to 90% of  
 28 the flash memory chip market and licenses nearly all of the aggregators operating in the United

1 States USB flash memory systems market.

2 294. SanDisk ties its licensing of flash memory technology to sales of a separate product,  
 3 namely flash memory chips. Specifically, through the royalty structure that SanDisk imposes on  
 4 PNY and other participants in the USB flash memory systems market, SanDisk severely penalizes  
 5 the use of flash memory chips that are not made or licensed by SanDisk (*i.e.*, in which SanDisk has  
 6 an economic interest), such that use of other flash memory chips (*i.e.*, Micron chips) is not  
 7 commercially viable.

8 295. As alleged in greater detail above, the terms of the anticompetitive uniform license  
 9 agreement that SanDisk has imposed on PNY, for example, provide for a 4% royalty based on the  
 10 price of a finished USB flash memory systems product if PNY uses a flash memory chip made or  
 11 licensed by SanDisk. It provides for a punitive additional 4% or 8% uncapped royalty if an  
 12 unlicensed flash memory chip is used.

13 296. On information and belief, the same or similar licensing terms apply to other  
 14 participants in the USB flash memory systems market.

15 297. PNY did not voluntarily agree to the royalty structure contained in the license  
 16 agreement for its own convenience. Rather, PNY was given no choice but to except this royalty  
 17 structure if it wanted to be a licensed aggregator and to avoid the threat of never-ending, financially-  
 18 ruinous patent infringement litigation.

19 298. Given the slim margins at which participants in the USB flash memory systems  
 20 market operate, the punitive royalty structure in SanDisk's uniform license renders it commercially  
 21 unviable to purchase Micron flash memory chips and forces market participants to purchase flash  
 22 memory chips in which SanDisk has an economic interest.

23 299. SanDisk's tying arrangement affects a substantial volume of interstate commerce.

24 300. Under well-established law, a tying arrangement is *per se* unlawful if four elements  
 25 are shown. Each is present here: (a) there are two separate products: flash memory technology  
 26 (tying product) and flash memory chips (tied product); (b) SanDisk has market power in the tying  
 27 product; (c) SanDisk forces purchasers (licensees) of the tying product to also take their  
 28 requirements of the tied product from SanDisk or from firms in which SanDisk has an economic

1 interest; and (d) there is a not insubstantial effect in the market for the tied product. SanDisk's tying  
 2 arrangement is accordingly *per se* unlawful.

3 301. In addition, SanDisk's tying arrangement is unlawful under the rule of reason  
 4 because it harms competition in the flash memory chips market in a variety of ways, including:

- 5 a. decreasing competitors' ability to compete in the market for flash memory chips;
- 6 b. enabling SanDisk and its licensees to extract higher, supra-competitive prices for  
 7 their flash memory chips (which, in turn, raise the prices of USB flash memory  
 8 systems and products); and
- 9 c. facilitating SanDisk's acquisition of market power in the flash memory chip  
 10 market.

11 302. The anticompetitive effects of SanDisk's conduct outweigh any procompetitive  
 12 benefits; indeed, there are no procompetitive benefits deriving from SanDisk's conduct at issue in  
 13 this complaint.

14 303. As a direct purchaser of flash memory technology and flash memory chips, and as a  
 15 competitor in the USB flash memory systems and products markets, PNY has suffered, and will  
 16 continue to suffer, damages as a direct and proximate result of SanDisk's tying practices.

17 304. PNY has been, and continues to be, irreparably harmed by SanDisk's tying practices,  
 18 for which there is no adequate remedy at law, and PNY is therefore entitled to an injunction  
 19 preventing further harm to PNY as a result of this conduct.

20 305. PNY is also entitled to treble damages.

21 **COUNT II**

22 **(Sherman Act § 1: Agreement in Restraint of Trade)**

23 306. PNY repeats and incorporates by reference the allegations set forth in Paragraphs 1  
 24 through 291 as if fully set forth herein.

25 307. The unlawful license agreement that SanDisk imposed on PNY and the comparable  
 26 unlawful license agreements that SanDisk imposes on other aggregators effects an unreasonable  
 27 restraint of trade and commerce in a manner prohibited by Section 1 of the Sherman Act. These  
 28 agreements to restrain trade are ongoing and continuing.

1       308. The unlawful license agreement that SanDisk imposed on PNY and the comparable  
 2 unlawful license agreements that SanDisk imposes on other aggregators affects interstate commerce  
 3 inasmuch as it affects competition and pricing in the markets for flash memory chips, systems and  
 4 products, all move in interstate commerce.

5       309. More specifically, in addition to the tying provision described above, the license  
 6 agreement that SanDisk imposed on PNY and the comparable unlawful license agreements that  
 7 SanDisk imposes on other aggregators contain the following anti-competitive terms or  
 8 requirements:

- 9       a. A requirement that PNY and other companies pay multiple royalties on the same  
 10 patented technology after patent coverage has been exhausted. Specifically, by  
 11 licensing the same patents to both chip manufacturers and to aggregators like  
 12 PNY, SanDisk receives double royalties on the sale of the same component parts  
 13 from the license of the same patent—one royalty from its licensed manufacturers  
 14 on their sales of flash memory chips, and a second royalty from aggregators like  
 15 PNY for their sale of flash memory chips in the form of USB flash memory  
 16 system products.
- 17       b. A requirement that royalties be paid on worldwide sales, as opposed to only on  
 18 products manufactured and sold in countries where SanDisk has patent rights.
- 19       c. A requirement that royalties be paid on all of an aggregator's net sales, whether  
 20 or not any of the licensed patents are practiced.
- 21       d. A requirement that royalties be paid on patents that have expired, patents that are  
 22 invalid, or patents that are not infringed.
- 23       e. A requirement that licensees cross-license to SanDisk their future innovations on  
 24 a royalty-free basis, such that even if a licensee develops or obtains access to an  
 25 alternative technology that it could use to practice fewer or none of SanDisk's  
 26 patents, the licensee would still be required to pay a royalty to SanDisk on any  
 27 sales of the new product and SanDisk would have the right to use the new  
 28 technology on a worldwide, royalty-free basis.

310. The unlawful license agreements have caused and continue to cause anticompetitive effects in the flash memory technology market, chip market, systems market, and products market.

311. The anticompetitive effects caused by the unlawful license agreements are not offset by any countervailing benefits.

312. As a result of the unlawful license agreements, and SanDisk's acts in furtherance thereof, PNY has suffered and will continue to suffer irreparable injury to its business and property, for which there is no adequate remedy at law, and PNY is therefore entitled to an injunction preventing further harm to PNY.

313. PNY is also entitled to treble damages.

### **COUNT III**

## (Sherman Act § 2: Monopolization and Attempted Monopolization — Flash Memory Technology Market)

314. PNY repeats and incorporates by reference the allegations set forth in Paragraphs 1 through 299 as if fully set forth herein.

315. Section 2 of the Sherman Act (15 U.S.C. § 2) prohibits, *inter alia*, the willful monopolization of any part of the trade or commerce among the States, as well as attempts to monopolize any part of the trade or commerce among the States.

316. SanDisk has substantial power in the relevant market for flash memory technology—both the technology directed toward flash memory chips and the technology directed toward flash memory systems—and its power is persistent and stable.

317. SanDisk has imposed anticompetitive and uniform licenses—and charged customers supracompetitive royalty rates—under threat of patent infringement litigation, to acquire, enhance, and/or maintain its monopoly power in the relevant market for flash memory technology in violation of Section 2 of the Sherman Act.

318. If for any reason SanDisk is not deemed to have monopoly power in the market for flash memory technology there exists a dangerous probability of SanDisk gaining such power.

319. With the specific intent to acquire or the intent to maintain monopoly power in and over the flash memory technology market, SanDisk has committed exclusionary, predatory, or

1 anticompetitive acts including:

- 2 a. Tying the licensing of its flash memory technology to the sale of flash memory  
3 chips in which it has an economic interest. Specifically, through the royalty  
4 structure that SanDisk imposes on PNY and other companies, as a condition of  
5 licensing its flash memory technology, SanDisk penalizes the use of flash  
6 memory chips that are not made or licensed by SanDisk (*i.e.*, in which SanDisk  
7 has an economic interest), such that purchase and use of other flash memory  
8 chips (*i.e.*, Micron chips) is not commercially viable.
- 9 b. Requiring PNY and other companies to pay multiple royalties on the same  
10 patented technology after patent coverage has been exhausted. Specifically, by  
11 licensing the same patents to both chip manufacturers and to aggregators like  
12 PNY, SanDisk receives double royalties on the sale of the same component parts  
13 from the license of the same patent—one royalty from its licensed manufacturers  
14 on their sales of flash memory chips, and a second royalty from aggregators like  
15 PNY for their sale of flash memory chips in the form of USB flash memory  
16 system products.
- 17 c. Licensing only a broad and unspecified patent portfolio (instead of specific  
18 individual patents).
- 19 d. Requiring royalties to be paid on worldwide sales, as opposed to only on  
20 products manufactured and sold in countries where SanDisk has patent rights;  
21 requiring royalties to be paid on all of an aggregator's net sales, whether or not  
22 any of the licensed patents are practiced; requiring royalties to be paid on patents  
23 that have expired, patents that are invalid, or patents that are not infringed.
- 24 e. Requiring licensees to cross-license to SanDisk their future innovations, such that  
25 even if a licensee develops or obtains access to an alternative technology that it  
26 could use to practice fewer or none of SanDisk's patents, the licensee would still  
27 be required to pay a royalty to SanDisk on any sales of the new product and  
28 SanDisk would have the right to use the new technology on a worldwide,

royalty-free basis. As a result, any competing flash memory technologies are nipped in the bud and SanDisk's power in flash memory technology is reinforced.

- f. Threatening retailers that they will not be able to use USB flash memory system products procured from SanDisk competitors who have not licensed SanDisk's flash memory technology, and that they will face disadvantageous prices and terms if they later seek flash memory system products from SanDisk.

320. SanDisk's anticompetitive licensing scheme and other anticompetitive conduct has given it the power to control prices and exclude competition in the relevant market.

321. Upon information and belief, there are high barriers to entry in the relevant market for flash memory technology that would prevent new competition from entering the market for at least two or more years at a level sufficient to deter or counteract SanDisk's exercise of its monopoly power in the flash memory technology market.

322. SanDisk's willful and wrongful acquisition, maintenance, and/or extension of its monopoly power (or its attempt to monopolize) is not the result of growth and development as a consequence of business acumen, or historical accident, or by virtue of offering a superior product or service, greater efficiency, or lower prices, but rather is the direct consequence of SanDisk's intentional exclusionary and predatory conduct in connection with its anticompetitive licensing scheme and as otherwise alleged herein.

323. There is no efficiency-enhancing procompetitive business justification for SanDisk's unfair, anticompetitive and predatory conduct.

324. SanDisk's anticompetitive licensing scheme and other anticompetitive conduct alleged herein has injured (and unless enjoined, will continue to injure) consumers and competitors in the relevant market through increased prices, decreased choice, reduced innovation, and other anticompetitive effects, including raising additional barriers to entry in the relevant market.

325. By reason of SanDisk's unlawful monopolization and/or attempted monopolization of the flash memory technology market, PNY—a customer in that market—has been injured in its business and property.

1           326. Unless enjoined and declared illegal, SanDisk's unlawful conduct will continue,  
 2 PNY will continue to sustain injury and damages, and competition will continue to decrease in the  
 3 relevant market.

4           327. The injuries to PNY, to other competitors and consumers, and to competition  
 5 described herein are the types of injuries the antitrust laws were intended to prevent because they  
 6 are a direct result of SanDisk's anticompetitive licensing scheme and other anticompetitive conduct  
 7 alleged herein, which occurred in the United States, and has a substantial effect on competition in  
 8 the relevant market.

9           328. PNY is entitled to injunctive relief and to treble damages.

10           **COUNT IV**

11           **(Sherman Act § 2: Attempted Monopolization — Flash Memory Chip Market)**

12           329. PNY repeats and incorporates by reference the allegations set forth in Paragraphs 1  
 13 through 314 as if fully set forth herein.

14           330. Section 2 of the Sherman Act (15 U.S.C. § 2) prohibits, *inter alia*, attempts to  
 15 monopolize any part of the trade or commerce among the States.

16           331. SanDisk has substantial power in the relevant market for flash memory chips, and if  
 17 for any reason SanDisk is not deemed to have monopoly power in the market for flash memory  
 18 chips there exists a dangerous probability of SanDisk gaining such power.

19           332. With the specific intent to acquire monopoly power in and over the flash memory  
 20 chip market, SanDisk has committed exclusionary, predatory, or anticompetitive acts including the  
 21 deployment of its substantial market power in the flash memory technology market to control the  
 22 downstream flash memory chip market.

23           333. Specifically, SanDisk has used its power in the flash memory technology market to  
 24 force aggregators (major consumers in the market for flash memory chips) to enter license  
 25 agreements that impose punitive royalties on the use of flash memory chips that are not made or  
 26 licensed by SanDisk (*i.e.*, in which SanDisk has an economic interest). This scheme restricts  
 27 competition in the flash memory chip market, erects substantial barriers to potential entrants to that  
 28 market, and permits SanDisk and its licensees to charge supra-competitive prices for flash memory

1 chips.

2 334. Upon information and belief, there are high barriers to entry in the relevant market  
 3 for flash memory chips that would prevent new competition from entering the market for at least  
 4 two or more years at a level sufficient to deter or counteract SanDisk's exercise of its monopoly  
 5 power in the flash memory chip market.

6 335. SanDisk's anticompetitive conduct is not motivated by technological or efficiency  
 7 concerns and has no valid or legitimate business justification. Instead, its purpose and effect is to  
 8 establish its monopoly position, and to diminish competition in the relevant market.

9 336. SanDisk's anticompetitive conduct alleged herein has injured (and unless enjoined,  
 10 will continue to injure) consumers and competitors in the relevant market through increased prices,  
 11 decreased choice, reduced innovation, and other anticompetitive effects, including raising additional  
 12 barriers to entry in the relevant market.

13 337. By reason of SanDisk's unlawful attempted monopolization of the flash memory  
 14 chips market, PNY—a consumer in that market—has been injured in its business and property.

15 338. Unless enjoined and declared illegal, SanDisk's unlawful conduct will continue,  
 16 PNY will continue to sustain injury and damages, and competition will continue to decrease in the  
 17 relevant market.

18 339. The injuries to PNY, to other competitors and consumers, and to competition  
 19 described herein are the types of injuries the antitrust laws were intended to prevent because they  
 20 are a direct result of SanDisk's anticompetitive conduct alleged herein, which occurred in the  
 21 United States, and has a substantial effect on competition in the relevant market.

22 340. PNY is entitled to injunctive relief and to treble damages.

23 **COUNT V**

24 **(Sherman Act § 2: Attempted Monopolization—SD Flash Memory System Product Market)**

25 341. PNY repeats and incorporates by reference the allegations set forth in Paragraphs 1  
 26 through 326 as if fully set forth herein.

27 342. Section 2 of the Sherman Act (15 U.S.C. § 2) prohibits, *inter alia*, attempts to  
 28 monopolize any part of the trade or commerce among the States.

1       343. SanDisk has substantial power in the relevant market for SD cards, and if for any  
 2 reason SanDisk is not deemed to have monopoly power in the market for SD cards there exists a  
 3 dangerous probability of SanDisk gaining such power.

4       344. With the specific intent to acquire monopoly power in and over the SD flash memory  
 5 system product market, SanDisk has committed exclusionary, predatory, or anticompetitive acts  
 6 including the deployment of its substantial market power in the flash memory technology market to  
 7 control the downstream SD card market.

8       345. SanDisk has attempted to avoid price competition with PNY and other competitors  
 9 in the SD card market by establishing exclusive dealing arrangements with key retail channels. On  
 10 information and belief, SanDisk has already established such arrangements with the retail stores  
 11 comprising approximately 50% of all U.S. SD card sales, and—if unchecked—SanDisk will  
 12 foreclose even more of the market to competition.

13       346. On information and belief, SanDisk’s exclusive dealing arrangements are having the  
 14 effect of denying SanDisk’s competitors meaningful market access and depriving them of the  
 15 opportunity to achieve economies of scale, while consumers face higher prices for SD cards than  
 16 they would if multiple brands were competing for sales at the same retail outlets.

17       347. Upon information and belief, there are high barriers to entry in the relevant market  
 18 for SD flash memory system products—including the SD licensing program, the relatively  
 19 concentrated retail distribution market, and the exclusive dealing arrangements imposed by  
 20 SanDisk—that would prevent new competition from entering the market for at least two or more  
 21 years at a level sufficient to deter or counteract SanDisk’s exercise of its monopoly power in the SD  
 22 card market.

23       348. SanDisk’s anticompetitive conduct is not motivated by efficiency concerns and has  
 24 no valid or legitimate business justification. Instead, its purpose and effect is to establish its  
 25 monopoly position, and to diminish competition in the relevant market.

26       349. SanDisk’s anticompetitive conduct alleged herein has injured (and unless enjoined,  
 27 will continue to injure) consumers and competitors in the relevant market through increased prices,  
 28 decreased choice, reduced innovation, and other anticompetitive effects, including raising additional

1 barriers to entry in the relevant market.

2 350. By reason of SanDisk's unlawful attempted monopolization of the SD flash memory  
 3 system product market, PNY—a competitor in that market—has been injured in its business and  
 4 property.

5 351. Unless enjoined and declared illegal, SanDisk's unlawful conduct will continue,  
 6 PNY will continue to sustain injury and damages, and competition will continue to decrease in the  
 7 relevant market.

8 352. The injuries to PNY, to other competitors and consumers, and to competition  
 9 described herein are the types of injuries the antitrust laws were intended to prevent because they  
 10 are a direct result of SanDisk's anticompetitive conduct alleged herein, which occurred in the  
 11 United States, and has a substantial effect on competition in the relevant market.

12 353. PNY is entitled to injunctive relief and to treble damages.

## 13 COUNT VI

### 14 (Sherman Act § 1 and Clayton Act §3: Exclusive Dealing)

15 354. PNY repeats and incorporates by reference the allegations set forth in Paragraphs 1  
 16 through 339 as if fully set forth herein.

17 355. SanDisk has substantial power in the relevant market for SD cards, and has boasted  
 18 that approximately one out of every two memory cards sold in the United States is a SanDisk  
 19 memory card.

20 356. SanDisk has pressured retail outlets for SD cards to enter into exclusive dealing  
 21 arrangements for SanDisk's SD cards. On information and belief, at least some of the exclusive  
 22 dealing arrangements are greater than a year in duration, and collectively they encompass the retail  
 23 channels accounting for approximately half of all U.S. SD card sales.

24 357. The effect of SanDisk's exclusive dealing arrangements has been the foreclosure of  
 25 the SD card market for SanDisk's competitors, and—with reduced competition—the raising of  
 26 prices for consumers.

27 358. The limited alternative channels of distribution that (for now) remain open to  
 28 SanDisk's competitors are not sufficient to provide those competitors with the opportunity to

achieve economies of scale.

359. SanDisk's anticompetitive conduct is not motivated by efficiency concerns and has no valid or legitimate business justification. Instead, its purpose and effect is to establish its monopoly position, and to diminish competition in the relevant market.

360. SanDisk's anticompetitive conduct alleged herein has injured (and unless enjoined, will continue to injure) consumers and competitors in the relevant market through increased prices, decreased choice, and other anticompetitive effects, including raising additional barriers to entry in the relevant market.

361. By reason of SanDisk's unlawful exclusive dealing arrangements in the SD flash memory system product market, PNY—a competitor in that market—has been injured in its business and property.

362. Unless enjoined and declared illegal, SanDisk's unlawful conduct will continue, PNY will continue to sustain injury and damages, and competition will continue to decrease in the relevant market.

363. The above-described exclusive dealing arrangements imposed by SanDisk constitute contracts in unreasonable restraint of trade in or affecting a substantial volume of interstate commerce in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1 and Section 3 of the Clayton Act.

364. The injuries to PNY, to other competitors and consumers, and to competition described herein are the types of injuries the antitrust laws were intended to prevent because they are a direct result of SanDisk's anticompetitive conduct alleged herein, which occurred in the United States, and has a substantial effect on competition in the relevant market.

365. PNY is entitled to injunctive relief and to treble damages.

## **COUNT VII**

## **(Declaratory Relief—Patent Misuse)**

366. PNY repeats and incorporates by reference the allegations set forth in Paragraphs 1 through 351 as if fully set forth herein.

367. There is an actual controversy between PNY and SanDisk as to the enforceability of

1 the terms of the License described herein, of sufficient immediacy and reality to warrant declaratory  
 2 relief. Pursuant to 28 U.S.C. Section 2201 and Federal Rule of Civil Procedure 57, PNY requests a  
 3 declaration that the License is unenforceable due to SanDisk's patent misuse.

4 368. As alleged in more detail above, SanDisk has engaged in patent misuse by forcing  
 5 PNY and others to enter into, and pay royalties under, the License described herein, which, among  
 6 other things:

- 7 a. Ties the licensing of SanDisk's flash memory technology to the sale of flash memory  
   8 chips in which it has an economic interest. Specifically, through the royalty structure  
   9 that SanDisk imposes on PNY and other companies, as a condition of licensing its  
 10 flash memory technology, SanDisk penalizes the use of flash memory chips that are  
 11 not made or licensed by SanDisk (*i.e.*, in which SanDisk has an economic interest),  
 12 such that purchase and use of other flash memory chips (*i.e.*, Micron chips) is not  
 13 commercially viable.
- 14 b. Requires PNY and other companies to pay multiple royalties on the same patented  
   15 technology after patent coverage has been exhausted. Specifically, by licensing the  
   16 same patents to both chip manufacturers and to aggregators like PNY, SanDisk  
   17 receives double royalties on the sale of the same component parts from the license of  
   18 the same patent—one royalty from its licensed manufacturers on their sales of flash  
   19 memory chips, and a second royalty from aggregators like PNY for their sale of flash  
   20 memory chips in the form of USB flash memory system products.
- 21 c. Licenses only a broad and unspecified patent portfolio, instead of specific individual  
   22 patents.
- 23 d. Requires royalties to be paid on worldwide sales, as opposed to only on products  
   24 manufactured and sold in countries where SanDisk has patent rights; requires  
   25 royalties to be paid on all of an aggregator's net sales, whether or not any of the  
   26 licensed patents are practiced; requires royalties to be paid on patents that have  
   27 expired, patents that are invalid, or patents that are not infringed.
- 28 e. Requires licensees to cross-license to SanDisk their future innovations, such that

1 even if a licensee develops or obtains access to an alternative technology that it could  
 2 use to practice fewer or none of SanDisk's patents, the licensee would still be  
 3 required to pay a royalty to SanDisk on any sales of the new product and SanDisk  
 4 would have the right to use the new technology on a worldwide, royalty-free basis.

5 369. PNY is entitled to a declaration that the License is unenforceable for patent misuse  
 6 and that PNY is not obligated to pay royalties under the License.

7 **COUNT VIII**

8 **(Cartwright Act § 16720 *et seq.*: Unlawful Tying Agreement)**

9 370. PNY repeats and incorporates by reference the allegations set forth in Paragraphs 1  
 10 through 355 as if fully set forth herein

11 371. SanDisk's unlawful acts described herein constitute an unreasonable restraint of  
 12 trade and commerce throughout California and the rest of the United States in violation of the  
 13 Cartwright Act, Sections 16720 *et seq.* of the California Business and Professions Code.

14 372. SanDisk has substantial power in the market for flash memory technology—both the  
 15 technology directed toward flash memory chips and the technology directed toward USB flash  
 16 memory systems.

17 373. SanDisk has tied its licensing of flash memory technology to sales of a separate  
 18 product, namely flash memory chips. Specifically, through the royalty structure that SanDisk  
 19 imposes on PNY and other participants in the USB flash memory systems market, SanDisk has  
 20 penalized the use of flash memory chips that are not made or licensed by SanDisk (*i.e.*, in which  
 21 SanDisk has no economic interest), and has coerced a substantial number of consumers of flash  
 22 memory chips into purchasing SanDisk and SanDisk-licensed flash memory chips.

23 374. On information and belief, the same or similar licensing terms apply to other  
 24 participants in the USB flash memory systems market.

25 375. SanDisk's unlawful tying arrangement affects a substantial volume of commerce,  
 26 substantially lessens competition in the flash memory chips market, and allows SanDisk and its  
 27 licensees to charge supracompetitive prices for such chips.

28 376. As a direct purchaser of flash memory technology and flash memory chips, and as a

1 competitor in the USB flash memory systems and products markets, PNY has suffered, and will  
 2 continue to suffer, damages as a direct and proximate result of SanDisk's unlawful tying practices.

3 377. PNY is entitled to injunctive relief and treble damages.

4 **COUNT IX**

5 **(Unfair Competition in Violation of Cal. Bus. & Prof. Code §§ 17200 et seq.)**

6 378. PNY repeats and incorporates by reference the allegations set forth in Paragraphs 1  
 7 through 363 as if fully set forth herein.

8 379. This Court has jurisdiction over this cause of action based on the doctrine of  
 9 supplemental jurisdiction (28 U.S.C. § 1337) because this cause of action arises from the same  
 10 transactions and from a common nucleus of operative facts as alleged in the federal causes of action  
 11 contained in this Complaint.

12 380. PNY is a "person" within the meaning of California Business & Professions Code §  
 13 17201.

14 381. As alleged herein, SanDisk's conduct constitutes "unfair" business practices. A  
 15 practice may be deemed unfair even if not specifically proscribed by some other law. Conduct that  
 16 significantly threatens or harms competition, or threatens an incipient violation of an antitrust law,  
 17 may be deemed "unfair."

18 382. As alleged herein, SanDisk's anticompetitive conduct is also "unlawful." SanDisk's  
 19 violations of the federal antitrust laws, or other laws as alleged herein, satisfy the "unlawful" prong  
 20 of Section 17200.

21 383. By reason of, and as a direct and proximate result of, SanDisk's unfair and unlawful  
 22 practices and conduct, PNY has suffered and will continue to suffer financial injury to its business  
 23 and property.

24 384. SanDisk's unfair and unlawful conduct has caused harm to PNY, competition, and  
 25 consumers.

26 385. Pursuant to Section 17203, the entry of permanent and mandatory injunctive relief  
 27 against SanDisk is necessary to enjoin SanDisk's ongoing wrongful business conduct. An  
 28 injunction is needed to enable and restore competition in the market for USB flash memory system

1 products.

2 **PRAYER FOR RELIEF**

3 WHEREFORE, PNY demands that judgment be entered in its favor and against SanDisk:

4 (a) declaring that SanDisk has engaged in unlawful tying in violation of Section 1 of the  
 Sherman Act and Section 16720 *et seq.* of the Cartwright Act;

5 (b) declaring that SanDisk has monopolized and/or has attempted to monopolize the  
 relevant markets in violation of Section 2 of the Sherman Act;

6 (c) declaring that the royalty provisions and other anticompetitive terms of the license  
 entered into by SanDisk with PNY (and other competitors of SanDisk) violate Section 2 of the  
 Sherman Act and are unenforceable;

7 (d) declaring that SanDisk's exclusive dealing arrangements violate Section 1 of the  
 Sherman Act, Section 3 of the Clayton Act, and Section 16720 *et seq.* of the Cartwright Act;

8 (e) ordering restitution of all sums paid as royalties by PNY to SanDisk pursuant to  
 SanDisk's anticompetitive licensing scheme;

9 (f) enjoining SanDisk from entering into licenses covering more than one jurisdiction or  
 covering jurisdictions in which SanDisk does not own patent rights;

10 (g) enjoining SanDisk from requiring its competitors to pay more than one royalty on the  
 same patented technology under 15 U.S.C. § 26 pursuant to those licenses;

11 (h) enjoining SanDisk from requiring its competitors to grant back to it royalty-free  
 worldwide licenses on all related future technological innovations made by them;

12 (i) enjoining SanDisk from maintaining or entering into anticompetitive exclusive  
 dealing arrangements;

13 (j) declaring that the conduct alleged in this Complaint is adjudged to be unfair and/or  
 unlawful in violation of Sections 17200 *et seq.* of the California Business & Professions Code;

14 (k) permanently enjoining SanDisk's unfair and/or unlawful business practices pursuant  
 to Section 17203 of the California Business & Professions Code;

15 (l) declaring the royalty provisions of the License to be invalid, void, or unenforceable  
 as to PNY; and

(m) awarding PNY treble damages, reasonable attorneys' fees, costs, expenses, and such further relief as the Court deems just and proper.

Dated: May 5, 2014.

WINSTON & STRAWN LLP  
MICHAEL S. ELKIN  
THOMAS P. LANE  
ERIN R. RANAHER  
DREW A. ROBERTSON

ARNOLD & PORTER LLP  
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By: /s/ Drew A. Robertson  
DREW A. ROBERTSON

Attorneys for Plaintiff  
PNY TECHNOLOGIES, INC.

**DEMAND FOR JURY TRIAL**

Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiff PNY Technologies, Inc. hereby demands a trial by jury on all issues so triable.

Dated: May 5, 2014.

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Attorneys for Plaintiff  
PNY TECHNOLOGIES, INC.

# **EXHIBIT A**

## **LIMITED PATENT CROSS LICENSE AGREEMENT**

LIMITED PATENT CROSS LICENSE AGREEMENT, dated as of January 2, 2008 (this "Agreement"), by and between SanDisk Corporation, a Delaware corporation (together with its Subsidiaries, "SanDisk"), and PNY Technologies, Inc., a Delaware corporation (together with its Subsidiaries, "Licensee").

### **RECITALS**

- A. SanDisk does, and Licensee may, own patents and patent applications pertinent to the design and manufacture of Non-Volatile Memory Products.
- B. SanDisk and Licensee are each engaged in their continuing programs of research and development of Non-Volatile Memory Product related technology, which will result in new discoveries and inventions, many of which will become the subject of new patent applications and patents.
- C. SanDisk and Licensee each want to respect the technology contributions of the other and want to increase their freedom to design and manufacture their own new products without infringing the rights of the other under patents or patent applications owned or controlled by the other.
- D. SanDisk and Licensee acknowledge and agree that SanDisk's license to Licensee is limited to Licensee Licensed Products that are Non-Volatile Memory Systems. Non-Volatile Memory Systems are combinations of Non-Volatile Memory Devices (which are not licensed in this Agreement except as used in Licensee Licensed Products as described in Section 1.12) and Non-Volatile Memory Controllers (which are licensed in this Agreement only as part of a Non-Volatile Memory System).

### **AGREEMENT**

In consideration of the foregoing and the promises of each party in this Agreement, the parties, intending to be legally bound, agree as follows:

#### **Article 1** **Definitions**

The following terms have the meanings indicated:

- 1.1 "Card Adapter" means any device which permits a card to communicate with a Host Device through a card specification and/or format other than the specification and format specific to the card.
- 1.2 "Card Reader" means any device, including software, which permits a card to communicate with a Host Device through a communication interface protocol.
- 1.3 "Communication Interface Protocol" means any and all hardware, software and/or firmware in a Host Device and/or Card Reader that enables the Host Device or Card Reader to communicate with a Non-Volatile Memory System Product.

1.4 "Computer System" means any general or special purpose electronic device having a processor and means for inputting data by a user and outputting data to a user, including personal computers, personal digital assistants, mobile phones, audio players, and video players, digital cameras, camcorders, GPS navigation systems, set-top boxes, time shifting consoles and video game consoles.

1.5 "Customers" include all bona fide purchasing entities that purchase a product from a selling entity, and further include all of the purchasing entities' Customers who purchase the product.

1.6 "Effective Date" means January 15, 2008.

1.7 "Embedded Non-Volatile Memory Device," means a memory device which consists of one or more Non-Volatile Memory Integrated Circuits without dedicated housing/packaging and any supporting means therefor.

1.8 "Embedded Non-Volatile Memory System" means one or more integrated circuits that together form a Non-Volatile Memory System residing on one or more semiconductor chips or circuit boards in a Computer System.

1.9 "Have Made" means that Licensee may contract with one or more Third Party to make Licensee Licensed Products for supply to Licensee and for sale by Licensee pursuant to its ordinary course of business, but (a) Licensee is not licensed to sell or transfer (directly or indirectly) such have made Licensee Licensed Products to the Third Party that makes such Licensee Licensed Products for Licensee (or who are owned or controlled by such Third Party) unless such transaction is a bona fide arms-length transaction and (b) within twenty days from receipt of a written request from SanDisk, Licensee will confirm to SanDisk, in writing, whether any Third Party is making any Licensee Licensed Products for Licensee under its Have Made right.

1.10 "Host Device" means any Computer System that is capable of receiving a Non-Volatile Memory System Product, including personal computers, personal digital assistants, mobile phones, audio players, television sets and video players.

1.11 "Integrated Circuit" means a unitary electronic circuit, the active circuit elements of which are fabricated at least in part of semi-conductive material.

1.12 "Licensee Licensed Products" are Licensee Non-Volatile Memory Systems using SLC Technology or MLC Technology, which systems are (a) manufactured with Non-Volatile Memory Devices provided by SanDisk or a SanDisk Licensed Non-Volatile Memory Device Manufacturer or otherwise accounted for under Sections 5.3 and 5.4, and (b) manufactured with, or configured to operate in coordination with, either (i) Non-Volatile Memory Controllers designed and/or manufactured by Licensee or (ii) Non-Volatile Memory Controllers supplied to Licensee by a Third Party. Examples include:

- CompactFlash cards;
- Card Readers;
- Card Adapters;
- PC (ATA) cards;

- IDE drives/cards or any other form of solid state drive designed to be a plug-compatible replacement for a rotating hard disk drive;
- USB based memory devices/cards; and
- Computer Systems comprising Embedded Non-Volatile Memory Systems, whether or not such Computer Systems are also Host Devices.

“Licensee Licensed Products” specifically exclude:

- xD picture cards and any and all versions and variants thereof;
- 3-Dimensional Memory and Associated Technology and Devices, Systems or Memory Cards of any type using 3-Dimensional Memory and Associated Technology
- MultiMediaCards and any and all versions and variants thereof, including RS MMC, MMC mobile, MMC micro, and secure MMC;
- Secure Digital (“SD”) cards and any and all versions and variants thereof, including MicroSD and MiniSD;
- Subscriber interface modules with mass storage capabilities or otherwise analogous to SanDisk’s megasim product family;
- Memory Stick and any and all versions and variants thereof, including Memory Stick Duo, Memory Stick Micro, Memory Stick PRO, and Memory Stick PRO Duo cards;
- Non-Volatile Memory Systems that include Non-Volatile Memory Devices which are not provided or manufactured by SanDisk, are not SanDisk Licensed Third Party Non-Volatile Memory Devices and for which Licensee has not paid a royalty, or otherwise accounted for, to SanDisk per Section 5.3 or 5.4;
- Non-Volatile Memory Controllers (except as used in Licensee Licensed Products as described above), designed or manufactured by Licensee or a Third Party for Licensee, including: (a) on a stand-alone basis, (b) as a chipset or (c) as an instantiation for integration by third parties into a Non-Volatile Memory Product;
- Non-Volatile Memory Devices (except as used in Licensee Licensed Products as described above);
- USB flash drives with codecs for video or otherwise analogous to SanDisk’s USB TV product family; and
- Trusted Flash and all versions and variants thereof.

If there is a conflict between the inclusions and exclusions, the exclusions will control.

**1.13** “Licensee Patent Claims” means all claims in all classes or types of patents, utility models and design patents (including originals or divisionals, continuations, continuations-in-part or reissues), in all countries or jurisdictions of the world now owned or controlled by Licensee or acquired by Licensee during the Term which (a) are issued before the expiration or termination of this Agreement, (b) except for consideration paid to employees, are not burdened by a requirement that Licensee pay consideration to another for the grant of a license under this Agreement (unless SanDisk offers to reimburse licensee for such consideration) and (c) cover the design, use or manufacture of Non-Volatile Memory Products.

- 1.14 "MLC Non-Volatile Memory Device" means a Non-Volatile Memory Device that contains MLC Technology.
- 1.15 "MLC Technology" means any technology that permits a Non-Volatile Memory Integrated Circuit in either wafer or chip form that is electrically programmable to store more than one bit of information on or in a single non-volatile memory cell.
- 1.16 "Net Sales" means, with respect to any Licensee Licensed Products which are first sold as individual items to a Customer, the invoice or sales price to the Customer multiplied by the number of units sold; except that, where such sales are to another Licensee Subsidiary, division or group, then Net Sales will mean the then current average selling price ("ASP") for such products to Third Party Customers (who are not Licensee subsidiaries, divisions, groups or affiliates of Licensee) in arms-length transactions, multiplied by the number of units sold. The invoice price will include the price of all components of said products, even if any components are not owned directly by Licensee (such as consigned goods). In no event will the price of those components not owned directly by Licensee (such as consigned goods) be less than the midpoint or higher of the spot price as of the date of procurement of those components as reported by a reputable tracking site such as DRAM Exchange ([www.dramexchange.com](http://www.dramexchange.com)) or as otherwise agreed upon in writing between the Parties. "Net Sales" shall not include, and Licensee may deduct, credits, rebates, advertising allowances, returns, price protection, and point of sale rebates (a) actually given to the customer that (b) are properly creditable under US GAAP against revenue.
- 1.17 "Non-Volatile Memory Controller" means any firmware, hardware and/or software that operates a Non-Volatile Memory Integrated Circuit, Non-Volatile Memory Device, Non-Volatile Memory System or Non-Volatile Memory System Product.
- 1.18 "Non-Volatile Memory Device" means a memory device which consists of one or more Non-Volatile Memory Integrated Circuits with or without the housing/packaging and any supporting means therefor.
- 1.19 "Non-Volatile Memory Integrated Circuit" means a non-volatile memory Integrated Circuit that is electrically programmable and electrically erasable, and consists of (a) non-volatile memory cells, each of which is electrically reprogrammable and utilizes two or more different charge states or conduction levels representing one or more bits of information, (b) a group of non-volatile memory cells, together comprising more than one byte of data, which is electrically erasable as a unit, and (c) any on-chip control, I/O, and other support circuitry necessary for the storage and retrieval of data in both wafer and die form.
- 1.20 "Non-Volatile Memory Product" means any Non-Volatile Memory Integrated Circuits; Removable and/or Embedded Non-Volatile Memory Devices; Non-Volatile Memory Systems and/or Embedded Non-Volatile Memory Systems; Computer Systems comprising Embedded Non-Volatile Memory Systems; Non-Volatile Memory System Products; and/or Non-Volatile Memory Controllers.
- 1.21 "Non-Volatile Memory System" means a system (including hardware, firmware, and/or software), which contains (a) one or more interconnected Non-Volatile Memory Devices or Non-Volatile Memory Integrated Circuits, and (b) in-system control (including the controller chips, firmware, software), I/O and other support circuits that are (i)

interconnected or configured to operate in coordination with the Non-Volatile Memory Devices or Non-Volatile Memory Integrated Circuits and (ii) necessary to the operation of the memory system, with or without the housing/packaging and supporting means therefor. A Non-Volatile Memory System can be integrated into a single die or formed as a multi-chip module, and can reside entirely on a Non-Volatile Memory System Product, or entirely on a Computer System, or can be distributed between a Non-Volatile Memory System Product and a Computer System.

- 1.22 "Non-Volatile Memory System Product" means a Non-Volatile Memory System on a card or other form factor, connectable to a Host Device, either temporarily by the user or permanently at the factory. Non-Volatile Memory System Products include ATA cards, Smart cards, Smart Media (SSFDC) cards, Compact Flash cards, PC cards, Linear Flash cards, Miniature cards, SD cards, xD cards, MMC cards, Memory Stick cards, Serial cards, including cards combining non-volatile storage with other functions such as communications, fax and modem, LAN, etc., and IDE, SCSI, USB or IEEE 1394 storage devices that utilize Non-Volatile Memory Integrated Circuits as the primary storage medium, and any other cards or USB flash drive or other form factors that utilize Non-Volatile Memory Integrated Circuits as the primary storage medium, such as hybrid hard disk drives, Mega-SIM cards, MP3 players and personal media players.
- 1.23 "Party" means each of SanDisk and Licensee.
- 1.24 "Person" means a corporation, company, limited liability company, partnership (general or limited), other form of business entity, individual or governmental entity.
- 1.25 "Related Party" means a Person that is not a Subsidiary of a signatory to this Agreement that (a) a Party has an ownership interest in the profits of such business (whether or not such interest is derived from shareholding), (b) that is under common control with a Party and/or (c) is engaged (whether or not by contract) in procurement, design or manufacturing for the benefit of or on behalf of a Party.
- 1.26 "Removable Non-Volatile Memory Device" means a memory device which consists of one or more Non-Volatile Memory Integrated Circuits with Housing/packaging and any supporting means therefor, which device can be removed from a Host Device by at least one of a manufacturer or end user.
- 1.27 "SLC Non-Volatile Memory Device" means a Non-Volatile Memory Device that contains SLC Technology.
- 1.28 "Sale" means any transfer, assignment, consignment, lease, or other disposal of product to a Third Party which does not qualify as a Sample.
- 1.29 "Sample" means a product provided in low quantities to a Third Party for evaluation purposes only. Sample does not include any product where the Third Party who receives it is permitted to transfer, assign or sell it (alone, or as a component of another product).
- 1.30 "SanDisk Device Patent Claims" are the subset of SanDisk Patent Claims directed to Non-Volatile Memory Devices, and specifically exclude any and all claims that in whole or in part:

- (a) are directed to enhanced functionality of Non-Volatile Memory Products such as security, encryption, authentication, Thin Client Computing, launching of applications, sensors, etc.;
- (b) apply specifically to the design, use or manufacture of Non-Volatile Memory Systems, and/or Non-Volatile Memory Controllers; or
- (c) relate to 3D Memory.

**1.31** "SanDisk Licensed Patent Claims" are the subset of SanDisk Patent Claims directed to Non-Volatile Memory Systems, and specifically exclude any and all claims that in whole or in part:

- (a) are directed to enhanced functionality of Non-Volatile Memory Products such as security, encryption, authentication, Thin Client Computing, launching of applications, sensors, etc.;
- (b) apply specifically to the design, use or manufacture of Non-Volatile Memory Integrated Circuits, Non-Volatile Memory Devices, and/or Non-Volatile Memory Controllers as components, rather than to their combination in a Non-Volatile Memory System; or
- (c) relate to 3D Memory.

**1.32** "SanDisk Licensed Products" means any SanDisk product where SanDisk has added value to such product and such products are sold under SanDisk's trademarks or bona fide uses of trademarks of SanDisk's customers for the benefit of such customers.

**1.33** "SanDisk Licensed Third Party Non-Volatile Memory Device" means Non-Volatile Memory Devices manufactured and/or sold under a SanDisk license by SanDisk Licensed Third Party Non-Volatile Memory Device Manufacturers.

**1.34** "SanDisk Licensed Third Party Non-Volatile Memory Device Manufacturer" means a Third Party manufacturer of Non-Volatile Memory Devices who is licensed by SanDisk to produce and sell such Non-Volatile Memory Devices.

**1.35** "SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer" means a Third Party manufacturer of Non-Volatile Memory System Products who is licensed by SanDisk under SanDisk Licensed Patent Claims to produce and sell Non-Volatile Memory System Products.

**1.36** "SanDisk Patent Claims" means all claims in all classes or types of patents, utility models and design patents (including originals or divisions, continuations, continuations-in-part or reissues), in all countries or jurisdictions of the world now owned or controlled by SanDisk or acquired by SanDisk during the Term which (a) are issued before the expiration or termination of this Agreement, (b) except for consideration paid to employees, are not burdened by a requirement that SanDisk pay consideration to another for SanDisk's grant of a license under this Agreement and (c) cover the design, use or manufacture of Non-Volatile Memory Products.

**1.37** "Subsidiary" means any corporation, company or other entity: (a) more than fifty percent of whose outstanding shares or stock entitled to vote for the election of directors (other

than any shares or stock whose voting rights are subject to restriction) is now or hereafter owned or controlled by either SanDisk or Licensee, directly or indirectly, but such corporation, company or other entity will be deemed to be a Subsidiary only so long as such ownership or control exists; or (b) which does not have outstanding shares of securities, as may be the case in a partnership, joint venture or unincorporated association, but more than fifty percent of whose ownership interest representing the right to make the decisions for such corporation, company or other entity is now or hereafter, owned or controlled, directly or indirectly, by a signatory hereto, but such corporation, company or other entity will be deemed to be a Subsidiary only so long as such ownership or control exists.

- 1.38 "Term" means the period from and including the Effective Date to and including the seventh anniversary of the Effective Date.
- 1.39 "Thin Client Computing" means programmable processing of data, in which an application program runs on a removable device.
- 1.40 "Third Party" means (a) in the case of software, any software that (i) did not originate with either Licensee or SanDisk or (ii) whose copyright is not owned by Licensee or SanDisk; (b) in the case of firmware or hardware, any firmware or hardware design that (i) did not originate with either Licensee or SanDisk or (ii) is not owned by Licensee or SanDisk; and (c) in all other cases a Person that is not a Party (including Related Parties).
- 1.41 "Third Party Foundry Product" means a Non-Volatile Memory Product (a) manufactured by Licensee or SanDisk on behalf of a Third Party where the design (other than industrial design) of such Non-Volatile Memory Product (i) did not originate with Licensee or SanDisk or (ii) is not exclusively owned by Licensee or SanDisk; or (b) designed, manufactured, reproduced, sold, leased, licensed or otherwise transferred through or by Licensee or SanDisk to a Third Party (or to Customers of, or as directed by, that Third Party) for the purpose of attempting to circumvent the terms of Article 3 or 4 that would otherwise apply to such Non-Volatile Memory Product if manufactured and licensed directly by such Third Party.
- 1.42 "3D Memory" is any type of memory that is monolithically formed in a plurality of physical levels of arrays of memory cells disposed above a silicon substrate, and circuitry associated with the operation of the memory cells.

## Article 2 Releases and Covenants

- 2.1 **SanDisk Release.** SanDisk releases, acquires and forever discharges Licensee, and only Licensee, from any and all claims or liability for infringement of any SanDisk Licensed Patent Claims arising before the Effective Date, to the extent that such infringement would be within the scope of the license granted herein by SanDisk. SanDisk further releases Licensee Customers from claims of patent infringement relating to Licensee's products that arose before the Effective Date to the extent that the acts giving rise to such claims would be licensed under this Agreement if the acts occurred after the Effective Date and during the Term.

**2.2 Licensee Release.** Licensee releases, acquits and forever discharges SanDisk, and only SanDisk, from any and all claims or liability for infringement of any Licensee Patent Claim arising before the Effective Date, to the extent that such infringement would be within the scope of the license granted herein by Licensee. Licensee further releases SanDisk Customers from claims of patent infringement relating to SanDisk's products that arose before the Effective Date to the extent that the acts giving rise to such claims would be licensed under this Agreement if the acts occurred after the Effective Date and during the Term.

### Article 3 Grant of Licenses By SanDisk

**3.1 SanDisk License.** SanDisk hereby grants to Licensee a non-sublicensable, non-exclusive, non-transferable (except as expressly stated herein), worldwide royalty bearing license under SanDisk Licensed Patent Claims to make, to Have Made, to use, to sell, to offer for sale, and to import the Licensee Licensed Products. Under the terms of this license, Licensee is permitted to use the names of Third Party original equipment manufacturers or resellers on Licensee Licensed Products, but is not licensed to manufacture Third Party Foundry Products.

**3.2 License Limitations.** Subject to Section 3.3, nothing in this Agreement will be construed to either expressly or impliedly give Licensee the right to sublicense SanDisk Licensed Patent Claims to others. The sale of Licensee Licensed Products will not be construed to provide or give rise to an implied license, by estoppel or otherwise, to third parties to any SanDisk Licensed Patent Claims, including combinations of such Licensee Licensed Products with any other products or methods of using such combinations. SanDisk has, and may during the term acquire, ownership interests in Persons that are not Subsidiaries of SanDisk and no license is granted hereunder with respect to patent claims owned or controlled by such non-Subsidiary Persons.

**3.3 Customer Protection.** Notwithstanding any other provision of this Article 3, SanDisk releases Licensee Customers from claims of infringement for acts that occur during the Term to the extent (a) such acts are within the scope of this license granted to Licensee from SanDisk for Licensee Licensed Products and (b) such acts relate to the inherent operation of Licensee Licensed Products and do not include combinations of Licensee Licensed Products with any other products or methods of using such combinations.

**3.4 No Patent Laundering.** Subject to Section 3.3, nothing in this Article 3 will be construed to grant any Third Party an express or implied license to make, Have Made, use, sell, offer for sale or import Third Party Non-Volatile Memory Products. At all times, SanDisk retains the right to enforce its intellectual property rights against third parties for the infringement of SanDisk Licensed Patent Claims or any other SanDisk intellectual property right. Nothing in this Section 3.4 limits Licensee's Have Made license rights.

**3.5 Patent License Only.** Nothing in this Article 3 will be construed to expressly or impliedly grant any license (a) to any SanDisk Patent Claims that are not SanDisk Licensed Patent Claims, or (b) to any SanDisk copyrights, trademarks, service marks, trade secrets, know-how, or confidential information.

**3.6 Rights Conferred.** The licenses granted in this Agreement confer freedom of action to use the SanDisk Licensed Patent Claims. The royalties or other consideration paid or furnished under this Agreement are solely for that freedom of action, and do not depend on actual use of any of the SanDisk Licensed Patent Claims.

#### **Article 4** **Grant of Licenses by Licensee**

**4.1 Licensee License.** Licensee grants to SanDisk non-exclusive, non-transferable (except as expressly stated herein), royalty-free, worldwide licenses under Licensee Patent Claims (without the right to sublicense), to make, to Have Made, to use, to sell and offer to sell, and to import SanDisk Licensed Products. Under the terms of this license, SanDisk is permitted to use the names of Third Party original equipment manufacturers or resellers on SanDisk Licensed Products, but is not licensed to manufacture Third Party Foundry Products.

**4.2 License Limitations.** Subject to Section 4.3, nothing in this grant to SanDisk or otherwise contained in this Agreement will either expressly or impliedly give SanDisk the right to sublicense Licensee Patent Claims to others. The sale of SanDisk Licensed Products will not be construed to provide or give rise to an implied license, by estoppel or otherwise, to third parties to any Licensee Patent Claims, including combinations of SanDisk Licensed Products with any other products or methods of using such combinations.

**4.3 Customer Protection.** Notwithstanding any other provision of this Article 4, during the Term, Licensee releases SanDisk Customers from claims of infringement for acts that occur during the Term to the extent (a) such acts are within the scope of this license granted to SanDisk from Licensee for SanDisk Licensed Products and (b) such acts relates to the inherent operation of SanDisk Licensed Products and do not include combinations of SanDisk Licensed Products with any other products or methods of using such combinations.

**4.4 No Patent Laundering.** Subject to Section 4.3, nothing in this Article 4 will be construed to grant any Third Party an express or implied license to make, Have Made, use, sell, offer for sale or import SanDisk Licensed Products. At all times, Licensee retains the right to enforce its intellectual property rights against third parties for the infringement of Licensee Patent Claims or any other Licensee intellectual property right. Nothing in this Section 4.4 limits SanDisk's Have Made license rights.

**4.5 Patent License Only.** Nothing in this Article 4 will be construed to expressly or impliedly grant any license to any Licensee copyrights, trademarks, service marks, trade secrets, know-how, or confidential information.

**4.6 Rights Conferred.** The licenses granted in this Agreement confer freedom of action to use the Licensee Patent Claims. The consideration paid or furnished under this Agreement are solely for that freedom of action, and do not depend on actual use of any of the Licensee Patent Claims.

#### **Article 5** **Payments**

**5.1 General.** SanDisk and Licensee agree (and covenant not to challenge) that for the convenience of the parties in order to reduce the complexities of calculating royalties for the manufacture, use and sale of Licensee Licensed Products in all countries in which SanDisk may hold a patent applicable to such products, royalties hereunder will be based on worldwide Net Sales of all Licensee Licensed Products.

**5.2 Payment Limited to Licensed Products.** Any payment under this Agreement by Licensee to SanDisk is solely and completely directed to Licensee Licensed Products. The parties agree that SanDisk is not entitled under this Agreement to receive any payment or compensation that relates to products other than Licensee Licensed Products.

**5.3 SLC Systems.** If: (a) the applicable Licensee Licensed Product contains only SLC Non-Volatile Memory Devices; and (b) such SLC Non-Volatile Memory Devices were either (i) manufactured by Licensee under a license with SanDisk permitting Licensee to manufacture Non-Volatile Memory Devices, or (ii) purchased by Licensee from a SanDisk Licensed Third Party Non-Volatile Memory Device Manufacturer, then (c) Licensee will pay to SanDisk a four percent royalty on worldwide Net Sales of all such Licensee Licensed Products, up to a maximum of \$4.00 per unit, from and after the Effective Date for the balance of the Term calculated on a quarterly basis (four times per year).

- (a) If (i) Licensee manufactures the SLC Non-Volatile Memory Devices in such Licensee Licensed Products and (ii) Licensee has not executed a license with SanDisk permitting Licensee to manufacture Non-Volatile Memory Devices, then (iii), in addition to the royalty in the first paragraph of this Section 5.3, Licensee will pay to SanDisk an additional worldwide royalty of four percent of the fair value of the SLC Non-Volatile Memory Devices.
- (b) If (i) Licensee obtains or purchases SLC Non-Volatile Memory Devices in such Licensee Licensed Product from a Third Party who is not a SanDisk Licensed Non-Volatile Memory Manufacturer, then (ii), in addition to the royalty in the first paragraph of this Section 5.3, Licensee will pay to SanDisk an additional worldwide royalty of four percent of the purchase price of the SLC Non-Volatile Memory Devices paid to the Third Party.
- (c) If (i) Licensee obtains or purchases SLC Non-Volatile Memory Devices in such Licensee Licensed Product from a SanDisk Licensed Non-Volatile Memory Manufacturer under such Third Party's license with SanDisk, then (ii), Licensee will not owe any incremental royalties with respect to such SLC Non-Volatile Memory Devices.

Notwithstanding anything to the contrary, Sections 5.3(a) and 5.3(b) only permit Licensee to use and sell the SLC Non-Volatile Memory Devices described therein solely as embedded in Licensee Licensed Products, and do not license Licensee to make or have made any Non-Volatile Memory Devices that are not part of Licensee Licensed Products. Subject to the foregoing, SanDisk agrees not to assert the SanDisk Device Patent Claims against Licensee or its Customers, based on the fact that Licensee makes or has made Non-Volatile Memory Devices, if Licensee has paid SanDisk the required amounts under Section 5.3(a) or 5.3(b). Notwithstanding anything to the contrary, the foregoing limited agreement not to assert the SanDisk Device Patent Claims against Licensee will not be deemed a grant by SanDisk of a license (express,

implied or otherwise) to any SanDisk patent rights to, or an agreement by SanDisk not to assert any SanDisk patent rights against, any supplier, manufacturer or subcontractor of Licensee, except to the extent that Licensee has paid the required royalty hereunder for such memory components.

**5.4 MLC Systems.** If: (a) the applicable Licensee Licensed Product contains any MLC Non-Volatile Memory Devices; and (b) such MLC Non-Volatile Memory Devices were either (i) manufactured by Licensee under a license with SanDisk permitting Licensee to manufacture Non-Volatile Memory Devices, or (ii) purchased by Licensee from a SanDisk Licensed Third Party Non-Volatile Memory Device Manufacturer, then (c) Licensee will pay to SanDisk a four percent royalty on worldwide Net Sales of all such Licensee Licensed Products, up to a maximum of \$4.00 per unit, from and after the Effective Date for the balance of the Term calculated on a quarterly basis (four times per year).

- (a) If (i) Licensee manufactures the MLC Non-Volatile Memory Devices in such Licensee Licensed Products and (ii) Licensee has not executed a license with SanDisk permitting Licensee to manufacture Non-Volatile Memory Devices, then (iii), in addition to the amounts in the first paragraph of this Section 5.4, Licensee will pay to SanDisk an additional worldwide royalty of eight percent of the purchase price of the MLC Non-Volatile Memory Devices.
- (b) If (i) Licensee obtains or purchases MLC Non-Volatile Memory Devices in such Licensee Licensed Product from a Third Party who is not a SanDisk Licensed Non-Volatile Memory Manufacturer, then (ii), in addition to the royalty in the first paragraph of this Section 5.4, Licensee will pay to SanDisk an additional worldwide royalty of eight percent of the purchase price of the MLC Non-Volatile Memory Devices paid to the Third Party.
- (c) If (i) Licensee obtains or purchases MLC Non-Volatile Memory Devices in such Licensee Licensed Product from a SanDisk Licensed Non-Volatile Memory Manufacturer under such Third Party's license with SanDisk, then (ii), Licensee will not owe any incremental royalties with respect to such MLC Non-Volatile Memory Devices.

Notwithstanding anything to the contrary, Sections 5.4(a) and 5.4(b) only permit Licensee to use and sell the MLC Non-Volatile Memory Devices described therein solely as embedded in Licensee Licensed Products, and do not permit Licensee to make or have made any Non-Volatile Memory Devices that are not part of Licensee Licensed Products. Subject to the foregoing, SanDisk agrees not to assert the SanDisk Device Patent Claims against Licensee or its Customers, based on the fact that Licensee makes or has made Non-Volatile Memory Devices, if Licensee has paid SanDisk the required amounts under Section 5.4(a) or 5.4(b). Notwithstanding anything to the contrary, the foregoing limited agreement not to assert the SanDisk Device Patent Claims against Licensee will not be deemed a grant by SanDisk of a license (express, implied or otherwise) to any SanDisk patent rights to, or an agreement by SanDisk not to assert any SanDisk patent rights against, any supplier, manufacturer or subcontractor of Licensee, except to the extent that Licensee has paid the required royalty hereunder for such memory components.

**5.5 Component Valuation.** If Licensee itself manufactures, or does not have direct ownership of, the SLC Non-Volatile Memory Devices or MLC Non-Volatile Memory Devices, as applicable, obtained from the non-SanDisk licensed Third Party manufacturer, or Licensee cannot otherwise reasonably determine the price of said SLC Non-Volatile Memory Devices or MLC Non-Volatile Memory Devices, as applicable, then Licensee will use a price for such SLC Non-Volatile Memory Devices or MLC Non-Volatile Memory Devices that is not less than the midpoint or higher of the spot price as of the date of procurement of those devices as reported by a reputable tracking site such as DRAM Exchange ([www.dramexchange.com](http://www.dramexchange.com)), or as otherwise agreed upon in writing between the parties, as the price basis to be used in the royalty calculation under Sections 5.3(a), 5.3(b), 5.4(a) and 5.4(b).

**5.6 Component Non-Assert.** SanDisk agrees not to assert any one of its SanDisk Patent Claims against a Licensee Licensed Product for the Non-Volatile Memory Controller component contained within such Licensee Licensed Product, if Licensee has paid SanDisk the required royalty amounts for the Licensee Licensed Product as set forth in this Agreement. This limited agreement not to assert the SanDisk Patent Claims against the Non-Volatile Memory Controller component of a Licensee Licensed Product will not be deemed a grant by SanDisk of a license (express, implied or otherwise) to any SanDisk patent rights to, or an agreement by SanDisk not to assert any SanDisk patent rights against, any supplier, manufacturer or subcontractor of Licensee. This limited agreement not to assert SanDisk Patent Claims against the Non-Volatile Memory Controller component of a Licensee Licensed Product shall not, in any manner, expand or alter the definition of "Licensee Licensed Product" in Section 1.12. This limited agreement not to assert SanDisk Patent Claims against the Non-Volatile Memory Controller component of a Licensee Licensed Product does not alter or modify Section 3.2. At all times, SanDisk retains the right to assert SanDisk Patent Claims against Licensee Licensed Products that have been combined with other products or methods such that the combination would (a) fall outside the scope of SanDisk Licensed Patent Claims and/or (b) transform Licensee Licensed Products into the excluded products set forth in Section 1.12.

**5.7 Purchased Licensed System Products.** Licensee will not owe any royalty payment for any Non-Volatile Memory System Product sold by Licensee if the Non-Volatile Memory System Product was purchased by Licensee from a SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer and the SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer has paid the required royalty to SanDisk for such Non-Volatile Memory System Product. However, before Licensee can withhold royalties on a product sold by the Licensee on the ground that Licensee purchased such product from a SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer, Licensee must obtain written certification from (a) SanDisk (under Section 5.8) or (b) SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer that such product is licensed by SanDisk. If the written certification is from SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer, the written certification must also include a statement that the SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer has and/or will pay any applicable royalty to SanDisk under the terms of its license agreement with SanDisk. If a SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer fails to pay the required royalties, SanDisk will make commercially reasonable efforts to collect the royalty from the SanDisk Licensed Third

Party Non-Volatile Memory System Product Manufacturer before seeking to recover any unpaid royalties from Licensee.

**5.8 Licensee Verification.** Upon Licensee's request, SanDisk will verify whether a supplier of Licensee is a SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer or SanDisk Licensed Third Party Non-Volatile Memory Device Manufacturer for a particular product purchased by Licensee. Such Licensee request will include the following information: (a) the name of the SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer, (b) the identity (e.g., product name, type and capacity) of the particular product to be purchased and (c) the address where the product will be manufactured. SanDisk will within fifteen days of receiving Licensee's request for verification respond to the request by indicating the duration and scope of licensed products of such potential vendor.

**5.9 No Double Royalties.** SanDisk is a member and may become a member, of consortia and/or associations offering licenses under intellectual property of SanDisk and/or other members of such consortia and/or associations, for the manufacture, use or sale of specific products, form factors and/or specifications incorporating or relating to non-volatile memory technology. The royalty and/or other consideration furnished hereunder are in addition to any royalty and/or consideration paid or furnished to any such consortia and/or associations, even though the products licensed by such entities are the same as licensed hereunder. The rights received by Licensee under this Agreement are different from and in addition to any SanDisk patent claims licensed through such consortia and/or associations. If Licensee joins or becomes a licensee of such consortia and/or association and thereby becomes obligated to pay under this Agreement and under the licensing program of such consortia and/or association for patent claims already paid for and licensed under this Agreement, the parties will negotiate in good faith a solution to avoid double payment of royalties by Licensee for the SanDisk Patent Claims licensed by such consortia and/or association.

If Licensee makes any royalty payment to SanDisk under Section 5.3(a), 5.3(b), 5.4(a) or 5.4(b) for purchases by Licensee of Non-Volatile Memory Devices included in Licensee Licensed Products without requesting verification under Section 5.8 of whether a Licensee supplier is a SanDisk Licensed Third Party Non-Volatile Memory System Product Manufacturer or is a SanDisk licensed Third Party Non-Volatile Memory Device Manufacturer, such payments will be considered an additional license fee and not a royalty, and such payment will not be refundable.

**5.10 Quarterly Payments.** Licensee will make payments four times a year for royalties earned in each quarterly period. A quarter will be a calendar quarter as follows: (a) January 1 through March 31; (b) April 1 through June 30; (c) July 1 through September 30; and (d) October 1 through December 31. Royalties due for each quarter will be paid by Licensee to SanDisk within forty five days from the end of each quarter.

**5.11 Quarterly Reports.** Licensee will provide to SanDisk a statement of the most recent quarterly worldwide sales of the royalty bearing Licensee Licensed Products within thirty days of the end of each quarterly period. SanDisk will have the right to have an independent Third Party accounting firm audit, at SanDisk's expense, Licensee's compliance with Article 5, upon reasonable notice to Licensee of not less than ten days, during normal business hours, at the premises of Licensee, and without unreasonable

interference with Licensee's normal business operations. The auditor will maintain in confidence any price, cost, margin, or other financial information obtained during the course of the audit, and will not disclose such information to SanDisk or any Third Party. The auditor may only notify SanDisk whether or not Licensee is in compliance with Article 5, and, if not, what the correct royalties should have been. Such auditor will sign the non-disclosure agreement and will be paid on other than a contingency basis. Such an audit will be conducted no more than once a year. Licensee will maintain appropriate records for three years after each accounting year. Licensee will promptly remedy any failure to pay the correct royalty. If any such audit reveals an underpayment of ten percent or more, Licensee will remit the amount of the underpayment and also pay a penalty equal to the underpayment plus interest at the prime rate of interest plus 250 basis points reported in *The Wall Street Journal* on the date that SanDisk has given notice of the audit to PNY. In addition, Licensee will pay the reasonable costs of such audit if any such audit reveals an underpayment of ten percent or more. Reimbursement will be made within thirty days by SanDisk for any overpayment, and if such reimbursement is not timely received, Licensee shall have the right to offset the overpayment against future royalty payments. To the extent an exchange rate between a foreign currency and U.S. currency is required for any obligation hereunder, the rate used will be the exchange rate on the last business day of the semiannual period in which the obligation is due as determined by that day's *The Wall Street Journal* (Western Edition).

- 5.12 Underpayment.** Subject to Section 5.13, it will constitute a material breach of this Agreement if Licensee in any quarterly period, underpays royalties by more than ten percent as determined by the auditor, and this error is substantiated by a second audit conducted by an independent, mutually agreed auditor at Licensee's expense and Licensee does not pay such amount within thirty days after notice, where such notice is provided after the second audit substantiates the first audit. The second audit must be completed within thirty days of the first.
- 5.13** Licensee shall have the right, in good faith, to dispute all or part of any audit findings by providing the auditor with a written notice specifying its objections within ten days after receiving the auditor's report. No interest or other penalty shall accrue during the period of any dispute as to the disputed portion of the audit report. Licensee shall seek to resolve the dispute with the auditor within forty five days after the audit report; Licensee shall have the right to request the assistance of an independent auditor (not on a contingent fee basis) to assist in the dispute. The SanDisk auditor shall consider any additional information supplied by Licensee or by Licensee's auditor, and shall issue a second report to all parties. Under no circumstances shall the SanDisk Auditor's fees be payable by Licensee for any dispute resolution process. Any unresolved dispute shall be resolved under the procedures set forth in Section 7.9(c).
- 5.14 First Sale.** Royalties for Licensee Licensed Products will accrue upon the earliest of (a) first sale (e.g., shipment), (b) transfer from Licensee to a Third Party, (c) lease of any Licensee Licensed Product, or (d) Licensee's receipt of payment thereof.
- 5.15 No Circumvention.** Under no circumstances will Licensee or a Related Party transact any sale or other distribution of Licensee Licensed Products, the effect of which is to artificially reduce the royalties due to SanDisk from Licensee. Licensee will be free to determine the selling price of the Licensee Licensed Products, but in any such sale or

other distribution of Licensee Licensed Products, the invoice price or transfer price must be based on a price that is reasonably equivalent to the then-prevailing fair market price of the Licensee Licensed Product as a whole.

#### **5.16 Payment Mechanics.**

- (a) All payments will be in U.S. dollars, wire transferred to SanDisk in accordance with the instructions provided from time to time by SanDisk. SanDisk will bear all taxes imposed on it with respect to the payments under this Article 5, and Licensee will take reasonable actions to minimize such taxes or enable SanDisk to obtain refunds of withheld taxes.
- (b) All royalty and license fee obligations for licensed products of the parties are expressly stated and identified in this Article 5.
- (c) Licensee will remain fully liable for all fees and royalties payable to SanDisk under this Agreement.

### **Article 6** **Effective Date, Term and Termination**

- 6.1 Term.** This Agreement will become effective on the Effective Date, and will continue in effect, unless sooner terminated as elsewhere provided in this Agreement, for the Term. Either Party may notify the other to negotiate for an extension of this Agreement at any reasonable time before or within ninety days after the end of the Term.
- 6.2 Termination for Breach.** If either Party commits a material breach of this Agreement and does not correct such breach within forty-five days after written notice complaining thereof is given to such Party (or within such longer period if (a) the parties mutually agree in writing to extend the cure period, or (b) the cure, by its nature requires more than forty-five days to cure), this Agreement may be terminated forthwith by a second written notice to that effect from the complaining Party.
- 6.3 Other Termination Rights.** Either Party may terminate this Agreement by giving written notice of termination to the other at any time upon or after:
  - (a) the filing by the other Party of a petition in bankruptcy or insolvency;
  - (b) any adjudication that the other Party is bankrupt or insolvent;
  - (c) the filing by the other Party of any petition or answer seeking reorganization, readjustment or arrangement of its business under any law relating to bankruptcy or insolvency;
  - (d) the appointment of a receiver for all or substantially all of the property of the other Party;
  - (e) the making by the other Party of any assignment for the benefit of creditors; or
  - (f) the institution of any proceedings for the liquidation or winding up of the other Party's business or for the termination of its corporate charter.

This Agreement will terminate on the forty-fifth day after such notice of termination is given.

**6.4 Effect of Termination.** If this Agreement is terminated pursuant to Section 6.2, the licenses granted to the defaulting Party will terminate forthwith, but the licenses granted to the non-defaulting Party will survive such termination for the balance of the term of this Agreement. If this Agreement is terminated pursuant to Section 6.3, the licenses granted by the non-terminating Party will survive the termination for the balance of the term of this Agreement, and the licenses granted by the terminating Party will terminate forthwith. Regardless of the date of termination pursuant to Section 6.3, and to the extent that licenses granted to Licensee herein survive such termination, the payments owing by Licensee under Article 5 will be made as scheduled to SanDisk or its successor company. Notwithstanding the foregoing paragraph, the provisions of this Agreement shall survive termination with respect to any Licensee Licensed Products purchased by Licensee's Customers for which the required royalty has been paid.

**6.5 Change of Control of SanDisk.** If SanDisk is acquired by or is merged into a Third Party, or if SanDisk transfers all or substantially all its Non-Volatile Memory Product business to a Third Party, the licenses granted by Licensee to SanDisk under Article 4 may be transferred to the combined company, but (a) the licenses granted by Licensee to SanDisk so transferred will become effective only from the date of such merger, acquisition, or transfer of the Non-Volatile Memory Product business, and (b) the licenses granted by Licensee to SanDisk so transferred will be limited to the using, making, having made, selling and offering to sell (directly or indirectly), and importing SanDisk Licensed Products.

**6.6 Change of Control of Licensee.** If Licensee is acquired by or is merged into a Third Party company, or if Licensee transfers all or substantially all its Non-Volatile Memory Product business to such Third Party company, the licenses granted by SanDisk to Licensee under Article 3 may be transferred to the successor company, but the licenses granted by SanDisk to Licensee so transferred will become effective only from the date of such merger, acquisition, or transfer of the Non-Volatile Memory Product business. The transfer permitted pursuant to this Section 6.6 is not intended to provide a license to such acquirer for products that were made, developed or sold by such acquirer prior to such transfer. If the transferee or successor has a separate license with SanDisk, SanDisk will resolve any conflict between the two license agreements in its sole discretion by terminating this Agreement or the separate license between SanDisk and the transferee or successor.

**6.7 Patent Challenge.** If either Party asserts the invalidity or unenforceability of any patent or patent claims licensed hereunder (other than an interference or opposition proceeding in front of the USPTO, the European Patent office or similar body), then the other Party will have the right to immediately terminate the licenses granted herein while retaining the benefit of all licenses granted to it by virtue of this Agreement.

**6.8 Post-Termination Rights to Sell Licensed Product.**

(a) Upon the expiration of this Agreement, the licenses granted pursuant to this Agreement by SanDisk to Licensee under SanDisk Licensed Patent Claims will terminate, but such termination will not give SanDisk any right of action against Licensee Licensed Products

that have had its royalty paid for before termination, or which are paid after expiration or termination for sales to Licensee Customers that occurred prior to expiration or termination. No termination or expiration otherwise shall give SanDisk any right of action against any Licensee Licensed Products sold, made, or Have Made before expiration or termination so long as royalties are paid to SanDisk with respect thereto.

- (b) Upon the expiration or termination of this Agreement, the licenses granted pursuant to this Agreement by Licensee to SanDisk under Licensee Patent Claims will terminate, but such termination will not give Licensee any right of action against any SanDisk Licensed Products sold, made, or Have Made before termination.

## Article 7

### Miscellaneous Provisions

- 7.1 Representations and Warranties.** Each of the parties represents and warrants that it has the right to grant the other the licenses granted hereunder and that this Agreement has been duly authorized, executed and delivered by such Party.
- 7.2 No Implied Agreements or Warranties.** Nothing contained in this Agreement will be construed as: (a) a warranty or representation that any manufacture, sale, lease, use or other disposition of SanDisk Licensed Products or Licensee Licensed Products hereunder will be free from infringement of patents, utility models and/or design patents; (b) a warranty or representation of the validity of any SanDisk Licensed Patent Claims or Licensee Patent Claims; (c) a warranty or representation that any SanDisk Licensed Patent covers any Licensee Licensed Product or that any Licensee Patent Claim covers any SanDisk Licensed Product; (d) an agreement to bring or prosecute actions or suits against third parties for infringement or conferring any right to bring or prosecute actions or suits against third parties for infringement; (e) conferring any right to use in advertising, publicity, or otherwise, any trademark, trade name or names, or any contraction, abbreviation or simulation thereof, of either Party; (f) conferring by implication, estoppel or otherwise, upon any Party licensed hereunder, any license or other right under any class or type of patent, utility model or design patent except the licenses and rights expressly granted hereunder; (g) conferring by implication, estoppel or otherwise, upon any Party licensed hereunder, any license or other right under any copyright, maskwork, or trade secret right; (h) an obligation on any Party to furnish any technical information or know-how; or (i) an obligation on any Party to enforce any licensed patents against any third parties.
- 7.3 Assignment.** This Agreement is personal to the parties, and, except as set forth in Sections 6.5 and 6.6, this Agreement or any right or obligation hereunder, is not assignable or delegable, whether in conjunction with a change in ownership, or the sale or transfer of the whole or any part of a Party's business or assets, either voluntarily, by operation of law, or otherwise, without the prior written consent of the other Party, which shall not be withheld, conditioned or delayed unreasonably. Any such purported assignment or transfer will be null and void. Assignment by either Party of any of its patents, or the applications thereof, which qualify as Licensee Patent Claims or SanDisk Licensed Patent Claims will not affect the license rights acquired hereunder to such patents, and any such assignment will be subject to the continuing license rights of the other Party.

**7.4 Notices.** All notices required or permitted to be given hereunder will be in writing and will be valid and sufficient if dispatched by internationally recognized overnight courier (such as DHL), freight prepaid, or delivered personally as follows:

If to SanDisk:

SanDisk Corporation  
601 McCarthy Blvd.  
Milpitas, California 95035  
United States of America  
Attention: Chief Intellectual Property Counsel

If to Licensee:

PNY Technologies, Inc.  
299 Webro Road  
Parsippany, NJ 07054  
Attention: Gadi Cohen, Chairman and CEO

With a copy (which will not constitute notice) to:

William J. Heller, Esq.  
McCarter & English LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, NJ 07102

Either Party may give written notice of a change of address and, after notice of such change has been received, any notice or request will thereafter be given to such Party as above provided at such changed address.

**7.5 Counterparts.** This Agreement may be executed in one or more counterparts (whether delivered by facsimile or otherwise), each of which will be considered one and the same agreement and will become effective when counterparts have been signed by each of the parties and delivered to the other Party.

**7.6 Entire Agreement.** This Agreement: (a) constitutes the entire agreement and supersedes all prior agreements, negotiations, arrangements and understandings, both written and oral, between the parties with respect to the subject matter hereof, and (b) is not intended to confer upon any Person, other than the parties, any rights, benefits or remedies of any nature whatsoever.

**7.7 Severability.** Any term or provision of this Agreement that is held to be invalid, void or unenforceable in any situation in any jurisdiction will not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the invalid, void or unenforceable term or provision in any other situation or in any other jurisdiction. If any term or provision of this Agreement is declared invalid, void or unenforceable, the parties agree that the authority making such determination will have the power to and shall, subject to the discretion of such authority, reduce the scope, duration, area or applicability of the term or provision, to

delete specific words or phrases, or to replace any invalid, void or unenforceable term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the original intention of the invalid or unenforceable term or provision.

**7.8 Governing Law.** This Agreement will be governed by the substantive laws of the State of California, all rights and obligations of the parties of this Agreement and the interpretation, construction and enforceability hereof will also be governed by the laws of the State of California.

**7.9 Enforcement.**

- (a) SanDisk and Licensee each agree (i) to submit to the jurisdiction of the United States District Court for the Northern District of California for any action properly brought pursuant to this Agreement; (ii) to waive any objection they may have now or hereafter to the venue of any suit brought pursuant to clause (i) above; and (iii) that service of process may be made by in the manner specified in Section 7.4.
- (b) Irreparable damage would occur if any of the provisions of this Agreement were not performed in accordance with their specific terms. Accordingly, the parties will be entitled to specific performance of the terms of this Agreement, this being in addition to any other remedy to which they are entitled at law or in equity.
- (c) No failure or delay on the part of either Party in the exercise or assertion of any right under this Agreement will impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation or agreement herein, nor will any single or partial exercise of any such right preclude other or further exercise thereof or of any other right. All rights and remedies under this Agreement are cumulative to, and not exclusive of, any rights or remedies otherwise available.
- (d) All disputes arising directly under the express terms of this Agreement will be resolved as follows: First, the senior management of both parties will engage in good faith negotiations for up to thirty days in an attempt to resolve such disputes. If the disputes cannot be resolved by the senior management within the thirty day good faith negotiation period, the parties will engage in a full-day (8 hours) mediation, with authorized senior executives of each Party present for the duration of the mediation. Should the mediation fail to result in an agreement-in-principle, either Party may initiate litigation proceedings in the Northern District of California. The parties are not obligated to comply with this Section 7.9(d) if compliance would cause any applicable statute of limitation to expire.
- (e) Any agreement on the part of a Party to any extension, waiver, amendment, modification or supplement of this Agreement or its rights hereunder will be valid only if set forth in an instrument in writing signed on behalf of such Party.

**7.10 No Public Announcement.** The content of this Agreement will not be published or disclosed to any Third Party without the other Party's written permission except as required by law or as may be required for reasonable auditing purposes or required securities law or stock exchange listing agreement disclosure. Notwithstanding the above, the parties will jointly publish a mutually agreed to press release promptly after execution of this Agreement date, and each Party may thereafter disclose or publish to

any Third Party any information disclosed in the mutually agreed to press release without the other Party's permission.

**7.11 Export Control Laws.** Anything contained in this Agreement to the contrary notwithstanding, the obligations of the parties hereto and of the Subsidiaries of the parties will be subject to all laws, present and future and including export control laws and regulations, of any government having jurisdiction over the parties hereto or the Subsidiaries of the parties, and to orders, regulations, directions or requests of any such government. Each Party will undertake to comply with and be solely responsible for complying with such laws applicable to such Party.

**7.12 Construction and Interpretation.** When a reference is made in this Agreement to a section or article, such reference will be to a section or article of this Agreement, unless otherwise clearly indicated to the contrary. Whenever the words "include," "includes" or "including" are used in this Agreement they will be deemed to be followed by the words "without limitation". The words "hereof," "herein" and "herewith" and words of similar import will, unless otherwise stated, be construed to refer to this Agreement as a whole and not to any particular provision of this Agreement, and article, section, exhibit and schedule references are references to the articles, sections, exhibits and schedules of this Agreement, unless otherwise specified. The plural of any defined term will have a meaning correlative to such defined term and words denoting any gender will include all genders and the neuter. Where a word or phrase is defined herein, each of its other grammatical forms will have a corresponding meaning. Any reference to a Party will include such Party's permitted successors and permitted assigns. If any ambiguity or question of intent or interpretation arises, this Agreement will be construed as if drafted jointly by the parties, and no presumption or burden of proof will arise favoring or disfavoring any Party by virtue of the authorship of any provision of this Agreement. No prior draft of this Agreement will be used in the interpretation or construction of this Agreement. Each provision of this Agreement will be given full separate and independent effect. Although the same or similar subject matters may be addressed in different provisions of this Agreement, except as expressly provided in this Agreement, each such provision will be read separately, be given independent significance and not be construed as limiting any other provision of this Agreement (whether or not more general or more specific in scope, substance or content). Headings are used for convenience only and will not in any way affect the construction or interpretation of this Agreement. The doctrine of election of remedies will not apply in constructing or interpreting the remedies provisions of this Agreement or the equitable power of a court considering this Agreement or the transactions contemplated hereby.

**7.13 No Implied Warranty.** EXCEPT AS EXPRESSLY SET FORTH HEREIN, THE LICENSES GRANTED HEREUNDER ARE GRANTED WITHOUT ANY WARRANTY OF ANY KIND. EACH PARTY HEREBY DISCLAIMS ANY IMPLIED WARRANTIES OF ANY KIND INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

**7.14 Damage Limitation.** EXCEPT FOR INFRINGEMENT OF THE OTHER PARTY'S INTELLECTUAL PROPERTY RIGHTS, NEITHER PARTY WILL BE LIABLE TO THE OTHER FOR ANY INDIRECT, CONSEQUENTIAL, INCIDENTAL, SPECIAL, EXEMPLARY OR PUNITIVE DAMAGES, OR FOR LOST PROFITS OR COSTS ASSOCIATED WITH OBTAINING SUBSTITUTE PERFORMANCE HEREUNDER,

ARISING FROM THIS AGREEMENT OR THE BREACH THEREOF, REGARDLESS OF WHETHER SUCH PARTY HAD BEEN WARNED OF SUCH DAMAGES, AND REGARDLESS OF THE THEORY UPON WHICH SUCH DAMAGES ARE CLAIMED, INCLUDING, FOR BREACH OF CONTRACT, WARRANTY, TORT, NEGLIGENCE OR STRICT LIABILITY.

The parties have duly executed and delivered this Agreement as of the date first written above.

SANDISK CORPORATION

PNY TECHNOLOGIES, INC.

By: *R.S.C.*

Name: RICHARD S. CHERNICKOFF  
Title: SENIOR VICE PRESIDENT

By: *M.J.C.*

Name: MARK J. CAVO  
Title: VICE President FINANCE